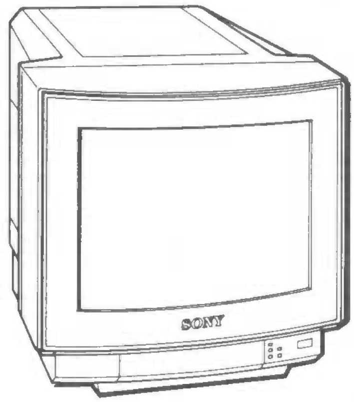
3331

GVM-1300

SERVICE MANUAL

US Model
Canadian Model
Chassis No. SCC-D43A-A



SPECIFICATIONS

Color system
NTSC system

Picture tube
Trinitron tube
Approx. 35.56 cm (13 inches) picture measured diagonally, 90-degree deflection
AG Pitch 0.25 mm

Resolution
Video inputs: 600 TV lines
RGB inputs: 900 dots x 560 lines
Maximum viewable pixels: 1024 dots x 768 lines

Color temperature
9300 K + 8MPCD

Frequency response
8 MHz(−6 dB, composite video)
30 MHz(−6 dB, RGB)

Linearity
Horizontal: less than ±5%
Vertical: less than ±5%

Line full range
Composite video input
Horizontal: 15.734 kHz ±500 Hz
Vertical: 52 to 60 Hz
RGB input
Horizontal: 15 to 36 kHz
Vertical: 50 to 100 Hz

Audio
0.5 W monaural

Overscan of the picture
Composite video input
less than +7%
RGB input
Horizontal: −7% to +5% variable
Vertical: −7% to +5% variable

Inputs
VIDEO IN (LINE A): BNC connector (1)
composite video, 1Vp-p ± 3dB, sync negative, automatic termination at 75 ohms
Y/C IN (LINE B): 4-pin, mini-DIN (1)
Y(luminance signal): 1Vp-p, sync negative, 75-ohm termination switchable
C (chrominance signal): 0.286Vp-p (burst signal), 75-ohm termination switchable
RGB A: D-sub 9-pin connector (1)
Analog RGB: 0.7Vp-p, 75 ohm terminated
Digital RGB : TTL level
RGB B: D-sub 25-pin connector (1)
Analog RGB: 0.7Vp-p, 75 ohm terminated
Digital RGB: TTL level

— Continued on next page —

TRINITRON® COLOR VIDEO MONITOR

SONY®

MICROFILM

AUDIO IN (LINE A/LINE B/RGB A):
phono jack (3)
−5 dBs, high impedance
CONTROL S: minijack (1)
RGB A SELECT: minijack (1)

Outputs
VIDEO OUT (LINE A): BNC connector (1)
Y/C OUT (LINE B): 4-pin mini-DIN (1)
AUDIO OUT (LINE A/LINE B): phono jack (2)

Power requirements
120 V AC, 50/60 Hz

Power consumption
95 W Max.

Opearting temperature range
0°C - 35°C (32°F -95°F)

Dimensions
Approx. 379 × 365.1 × 411 mm (w/h/d)
(15 × 14$^{3}/_{8}$ × 16$^{1}/_{4}$ inches)

Weight
Approx. 17 kg (37 lb 8 oz)

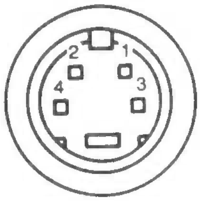
Accessory supplied
AC power cord (1)
D-sub 9 pin adaptor (1)

Optional accessory
Display stand SU-552

Design and specifications subject to change without notice.

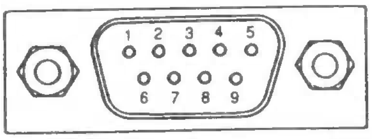
Pin assignment

Y/C (Y/C separate) IN connector (4-pin)



Pin No.	Signal	Description
1	Y-input	1 Vp-p, sync negative, 75 ohms
2	CHROMA sub-carrier-input	300 mVp-p, burst signal Delay time between Y and C: within 0±100 nsec., 75 ohms
3	GND for Y-input	Ground
4	GND for CHROMA-input	Ground

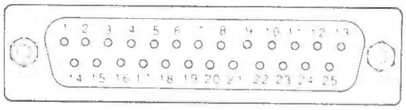
RGB multi connector (9-pin)



Pin No.	Signal				
	Analog	Digital 8-color	Digital 16-color	Digital 64-color	Digital monochrome
1	GND	GND	GND	GND	GND
2	(NC)	(NC)	(NC)	r	(NC)
3	R	R	R	R	(NC)
4	G	G	G	G	(NC)
5	B	B	B	B	(NC)
6	(NC)	(NC)	I	g	I
7	(NC)	(NC)	(NC)	b	G
8	H/HV	H/HV	H/HV	H/HV	H/HV
9	V	V	V	V	V
Sync level	HV:1Vp-p (Positive or Negative) H,V:TTL level (Positive or Negative)	TTL level (Positive or Negative)	TTL level (H:Positive V:Positive)	TTL level (H:Positive V:Negative)	TTL level (H:Positive V:Negative)

GND: Ground R: Red G: Green B: Blue
(NC): No connection
H: Horizontal sync V: Vertical sync
HV: Composite sync I: Intensity
r: Secondary red g: Secondary green b: Secondary blue

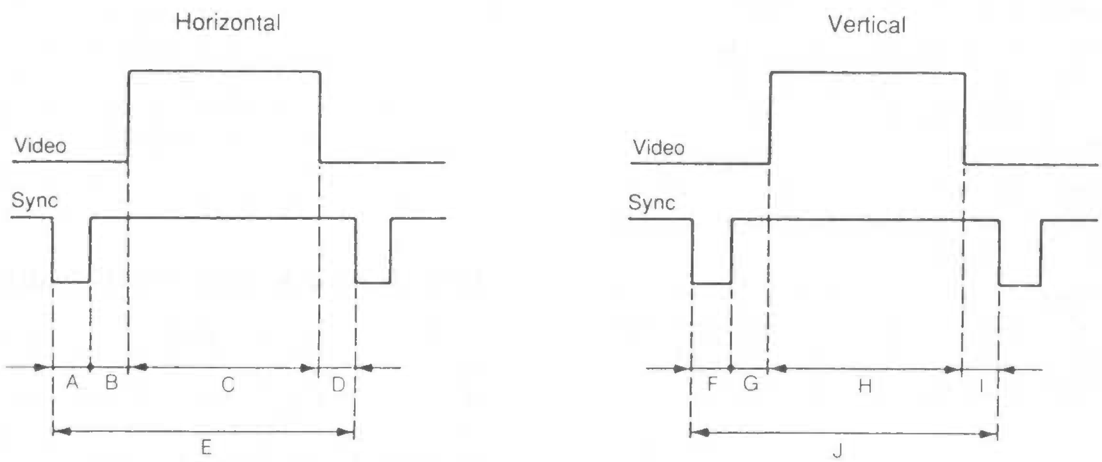
RGB multi connector (25-pin)



Pin No.	Signal	Signal level
1	IBM select	H (5 V): IBM mode L: 3 Bit TTL
2	Audio select	H (5 V or open): Audio inputs from #13 L (less than 0.4 V): Audio inputs from the LINE AUDIO IN jacks
3	Video input (composite video signal) H. sync or composite sync	When the high state is selected at #9: 1 Vp-p, 75 ohm terminated (Negative polarity sync),with the SUPERIMPOSE switch set to ON 1–4 Vp-p, 75 ohm terminated (Negative or Positive), with the SUPERIMPOSE switch set to OFF When the low state is selected at #9: TTL level
4	Blue input	Positive polarity When the high state is selected at #9: Analog signal (0.7 Vp-p, 75 ohm terminated, non sync 1 Vp-p, 75 ohm terminated, with sync on G signal) When the low state is selected at #9: Digital signal (TTL level)
5	Green input	
6	Red input	
7	NC	
8	NC	
9	Analog/digital mode select	H (open): Analog signal (0.7 Vp-p) L (ground): Digital signal (TTL level)
10	RGB B/NORMAL mode select (Function switch)	H (3 V to 12 V): Signal input from the 25 pin D-sub L (less than 2 V): Composite video inputs from LINE or Y/C input impedance more than 22 kilo ohms
11	V. sync	TTL level
12	Blanking input	When the high state is selected at #9: H (1 V to 3 V): RGB input from the 25 pin D-sub L (less than 0.4 V): Composite or Y/C video inputs. 75 ohm terminated (Rapid switch) When the low state is selected at #9: H (5 V or open): RGB input from the 25 pin D-sub L (ground): Composite video input from LINE VIDEO IN
13	Audio input	Input level –5 dBs (normal), input impedance more than 47 kilo ohms
14	EXT/INT video select	Functions with the SUPERIMPOSE switch set to ON. H (open): Sync signal input from #3 L (ground): Sync signal input from LINE or Y/ C
15	Video input return	
16	Blue input return	
17	Green input return	
18	Red input return	
19	Ground	
20	Video output (composite sync output)	Output level 1.0 Vp-p, within sync 0.3 Vp-p output impedance 75 ohm

Pin No.	Signal	Signal level
21	Video output return	
22	Audio common return	
23	Audio output	Output level –5 dBs (normal) output impedance less than 10 kilo ohm
24	Blanking input return	
25	IBM luminance signal	Positive polarity When the high state is selected at #1: TTL level When the low state is selected at #1: Low state (GND)

Timing Chart



		VGA compatible			CGA compatible	EGA compatible
fH		31.47 kHz			15.68 kHz	21.86 kHz
A (μs)		3.81			4.45	4.9
B (μs)		1.91			8.03	1.6
C (μs)		25.42			44.83	39.3
D (μs)		0.64			6.47	0
E (μs)		31.78			63.78	45.8
fV		70 Hz		60 Hz	60 Hz	60 Hz
F (ms)		0.064	0.064	0.064	0.19	0.6
G (ms)		1.08	1.87	1.017	2.11	0
H (ms)		12.71	11.13	15.26	12.74	16.0
I (ms)		0.416	1.206	0.349	1.64	0.05
J (ms)		14.27	14.27	16.69	16.68	16.7
Sync Polarity	H	–	+	–	+	+
	V	+	–	–	+	–

SAFETY CHECK-OUT
(US Model Only)

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cord for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the B+ and HV to see they are at the values specified. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

HOW TO FIND A GOOD EARTH GROUND

A cold-water pipe is guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth-ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms. If a cold-water pipe is not accessible, connect a 60–100 watts trouble light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side of the line, the lamp should light at normal brilliance if the screw is at ground potential. (See Fig. B)

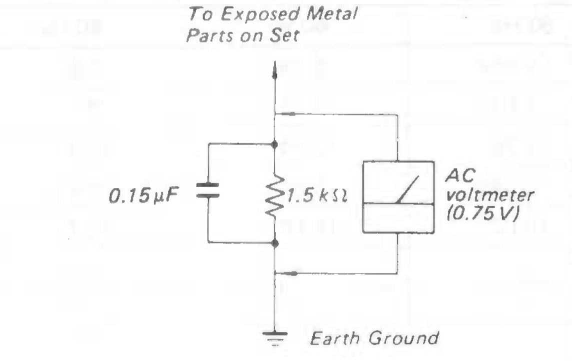


Fig. A. Using an AC voltmeter to check AC leakage.

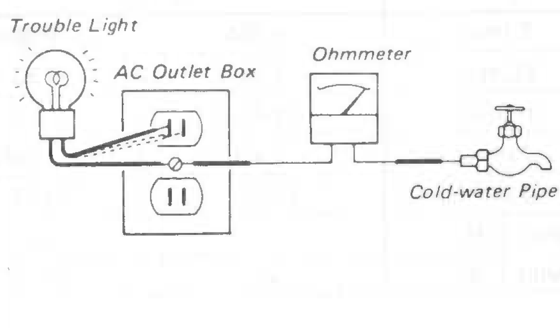


Fig. B. Checking for earth ground.

TABLE OF CONTENTS

WARNING !!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

ATTENTION!!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÂSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE.
LE CHÂSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

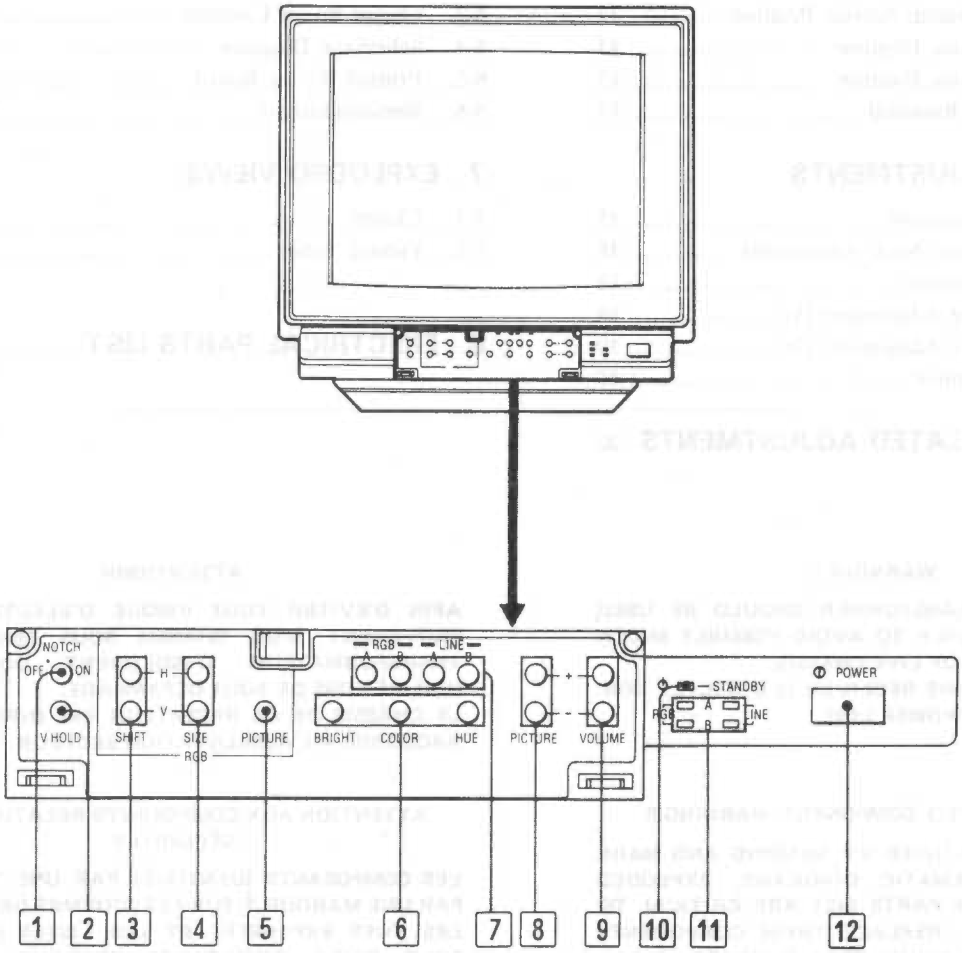
ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÈS PAR UNE TRAME ET PAR UNE MARQUE ⚠ SUR LES SCHÉMAS DE PRINCIPE, LES VUES EXPLOSÉES ET LES LISTES DE PIECES SONT D'UNE IMPORTANCE CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÉCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY. LES RÉGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT SONT IDENTIFIES DANS LE PRÉSENT MANUEL. SUIVRE CES PROCÉDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONCTIONNEMENT EST SUSPECTÉ.

SECTION 1
GENERAL

1-1. LOCATION AND FUNCTION OF PARTS AND CONTROLS

Front panel



[1] NOTCH switch
Normally set this switch to the OFF position to obtain fine picture details without color spill or color noise. When a microcomputer, such as APPLE II, is connected and stripes appear, set it to the ON position.

[2] V HOLD (vertical hold) control
If the video input picture rolls vertically, use this control to stabilize it.

Note

Control [2] does not function for RGB input pictures.

[3] RGB H/V SHIFT (horizontal/vertical shift) controls
Turn the H-SHIFT control to adjust the horizontal position of the RGB input picture, if it is off center. Turn it clockwise to shift the picture toward the right and counterclockwise to shift the picture toward the left.
Turn the V-SHIFT control to adjust the vertical position of the RGB input picture, if it is off center. Turn it clockwise to shift the picture upward and counterclockwise to shift the picture downward.

[4] RGB H/V SIZE (horizontal/vertical size) controls
Turn the H-SIZE control to adjust the horizontal size.
Turn the V-SIZE control to adjust the vertical size.

[5] RGB PICTURE control
Adjust this control if the picture level of RGB inputs differs significantly from that of video inputs.
Turn this control clockwise to make the contrast and color intensity of the RGB input picture stronger, or counterclockwise to make them weaker.

Note

- Controls [3] to [5] function only for RGB input pictures. However, they do not function when the RGB B input is selected with the SUPERIMPOSE switch on the rear panel set to ON.
- When turning the controls [1] – [4], use the supplied screwdriver (attached to the panel cover).

[6] Picture adjustment controls

BRIGHT (brightness) control
Normally keep this control at the center detent position. Turn it clockwise to make the picture brighter or counterclockwise to make it darker.

COLOR control
Turn this control clockwise to make the picture more vivid or counterclockwise to make it paler.

HUE control
Use this control to obtain the most natural skin tones. Turn it clockwise to add green to the skin tones or counterclockwise to add purple/red hues.

Notes

- The COLOR and HUE controls do not function when the RGB A input is selected irrespective of the SUPERIMPOSE switch setting.
- The COLOR and HUE controls do not function when the RGB B input is selected with the SUPERIMPOSE switch set to OFF.

[7] Input select buttons
Press to select the input source to be monitored.

RGB A: for input signals fed through the RGB A connector and the RGB A AUDIO jack
RGB B: for input signals fed through the RGB B connector
LINE A: for input signals fed through the LINE A connectors
LINE B: for input signals fed through the LINE B connectors

[8] PICTURE +/– buttons
Press the + button to make the contrast and color intensity stronger or press the – button to make them weaker.

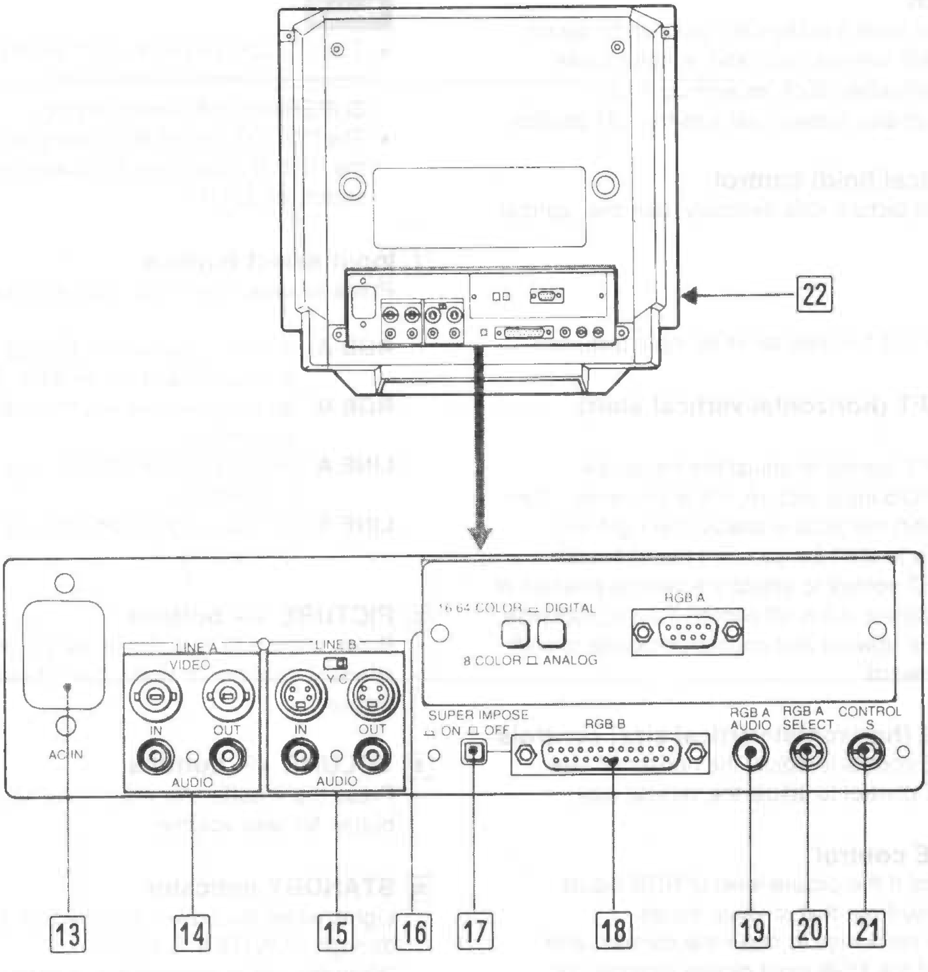
[9] VOLUME +/– buttons
Press the + button for more volume or press the – button for less volume.

[10] STANDBY indicator
Lights when the power is turned off by remote control through CONTROL S signal.
While the unit is operating, this indicator functions as the response indicator.
It blinks when the VOLUME or PICTURE buttons are pressed.
It lights steadily at the highest or lowest level of volume or picture level.

[11] Input select indicators
(RGB A/RGB B/LINE A/LINE B)
When the input source is selected, the corresponding indicator lights.

[12] POWER switch
Depress to turn on the monitor. Press again to turn it off.

Rear



13 AC IN connector

Connect the supplied power cord.

14 LINE A

To monitor the input signal fed through this line input, press the LINE A input select button on the front panel.

VIDEO IN connector(BNC type)
AUDIO IN jack(monaural)(phono type)
Connect to the video and audio outputs of video equipment such as VCRs or video disc players.
For a loop-through connection, connect to the video and audio outputs of another monitor.

VIDEO OUT connector(BNC type)
AUDIO OUT jack(monaural)(phono type)
For a loop-through connection, connect to the video and audio inputs of another monitor.
When a connecting cord is connected to the VIDEO OUT connector, the 75-ohm termination of the input is automatically released and the signal input to the VIDEO IN connector is output from this connector.

15 LINE B

To monitor the input signal fed through this line input, press the LINE B input select button.

Y/C 75 Ω termination switch
When only the Y/C IN connector is connected (i.e. nothing is connected to the Y/C OUT connector), set this switch to ON.
When both Y/C IN and OUT connectors are connected together for a loop-through connection, set this switch to OFF.

Y/C IN connector(4-pin mini-DIN)
Connect to the Y/C output of video equipment.
AUDIO IN jack(monaural)(phono type)

Y/C OUT connector(4-pin mini-DIN)
For a loop-through connection, connect to the Y/C input of another monitor.
AUDIO OUT jack(monaural)(phono type)

16 RGB A interface unit

16, 64 COLOR/8 COLOR selector
Depress this selector when digital RGB equipment having 16- or 64-color mode is connected to the RGB A connector. The 16- or 64-color mode is automatically selected by sync polarity. Keep the selector released for digital RGB equipment having the 8-color mode.

DIGITAL/ANALOG selector
Depress this selector when video equipment having digital RGB output is connected to the RGB A connector. Release the selector for equipment having analog RGB output.

RGB A connector (D-sub 9-pin)
Connect to video equipment having either digital or analog RGB output.
To monitor the input signal fed through this connector, press the RGB A input select button.

Note

For connection with a microcomputer, be sure to use either of the following optional connecting cables:
SMF-521 (9-pin to 15-pin)
SMF-520 (9-pin to 9-pin)

17 SUPERIMPOSE switch

Set this switch to ON (⏏) to display the composite video signal from an 8 mm video cassette recorder, etc., or to perform superimposition. In this case, the RGB H/V SHIFT, RGB H/V SIZE and RGB PICTURE controls do not function.
Set this switch to OFF (⊓) to display the RGB signal from a microcomputer, etc. In this case, the sync signal should be supplied to pin 3 (H. sync) or pin 11 (V. sync) of the RGB B connector.

Note

When the RGB B/NORMAL mode select signal is supplied to pin 10 of the RGB B connector with the SUPERIMPOSE switch set to ON, the previously selected LINE A or LINE B indicator lights together with the RGB B indicator.

18 RGB B connector (D-sub 25-pin)

Connect to video equipment having either digital or analog RGB output.
To monitor the input signal fed through this connector, press the RGB B input select button.

Note

For connection with a microcomputer, be sure to use either of the following optional connecting cables:
SMF-524 (25-pin to 15-pin)
SMF-525 (25-pin to 9-pin)

19 RGB A AUDIO input jack (phono type)

Connect to the audio outputs of the RGB equipment connected to the RGB A connector.

20 RGB A SELECT connector (minijack)

When ground potential is applied to this connector, signal input from the RGB A connector will be monitored regardless of the setting of the input select buttons on the front panel. If a power supply of 5 V is applied to the connector or the circuit is open, the input signal selected with the input select buttons will be monitored.
This connector allows the input source monitored to be selected with external equipment.

21 CONTROL S input connector (minijack)

Connect to the CONTROL S output of video equipment. The power on/off, input select, volume and picture settings can be remotely controlled through the equipment connected.

Note

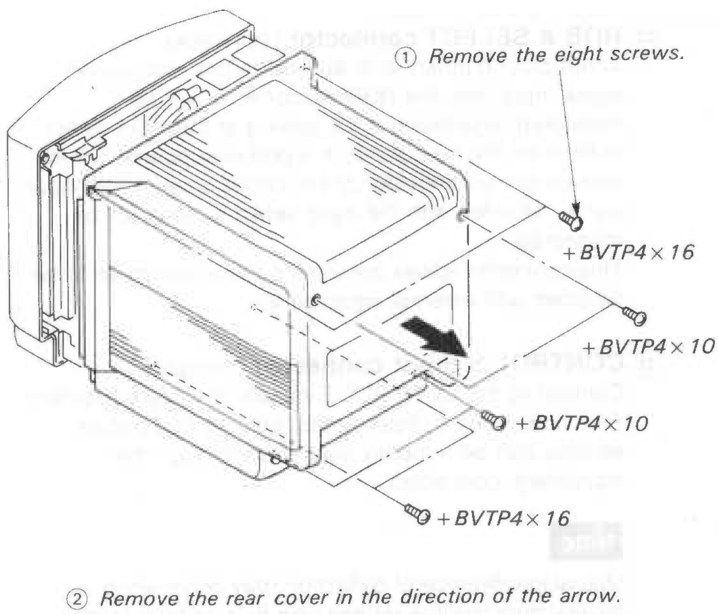
Mutual interference of deflection may occur when several monitors are ranged side by side for a loop-through connection, as this unit is compatible with the signals of high horizontal frequencies. In such a situation, allow adequate space between each unit.

22 Earphone jacks

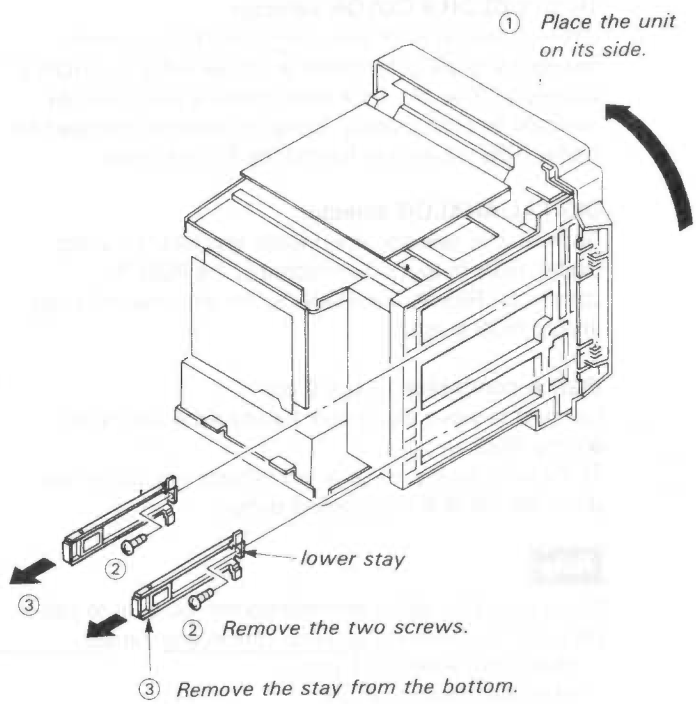
Phone 1 :When the earphone is connected, the sound through the speaker is also audible.
Phone 2 (Switched) :When the earphone is connected, the sound through the speaker is not audible.

SECTION 2
DISASSEMBLY

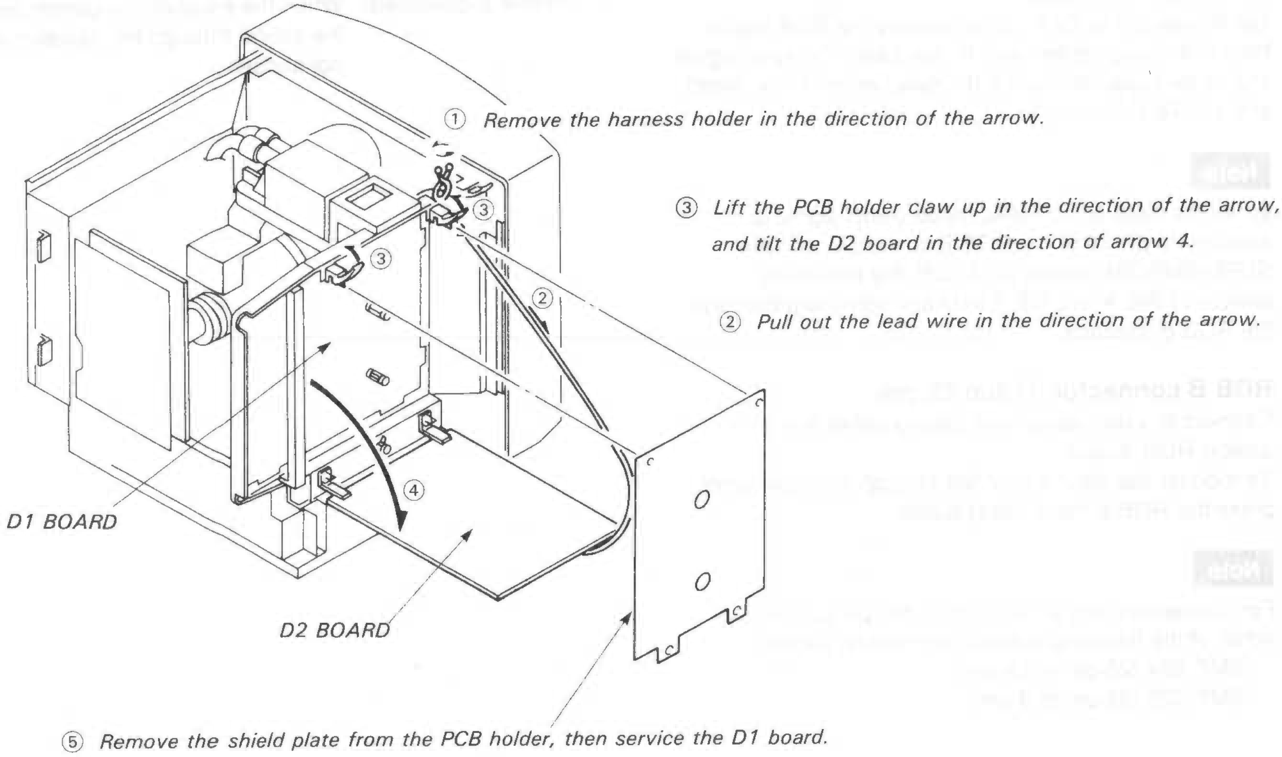
2-1. REAR COVER REMOVAL



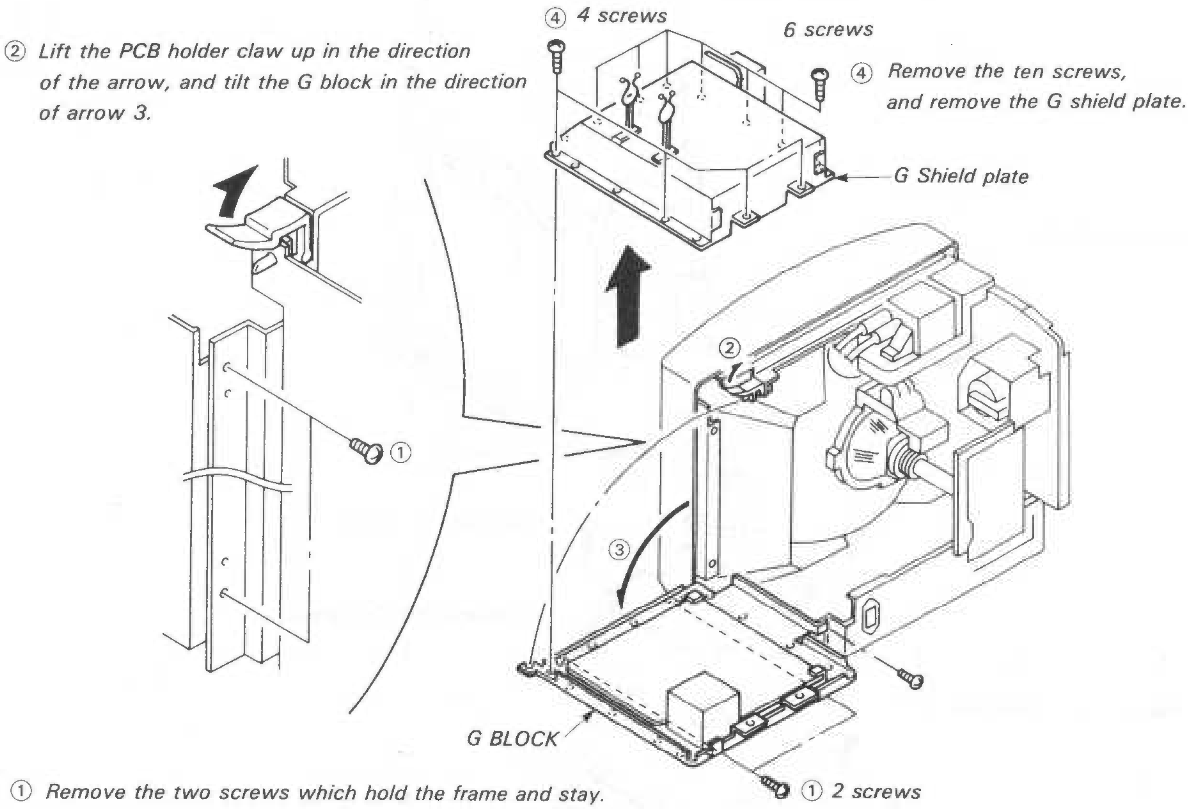
2-2. A AND B BORDS SERVICE POSITION



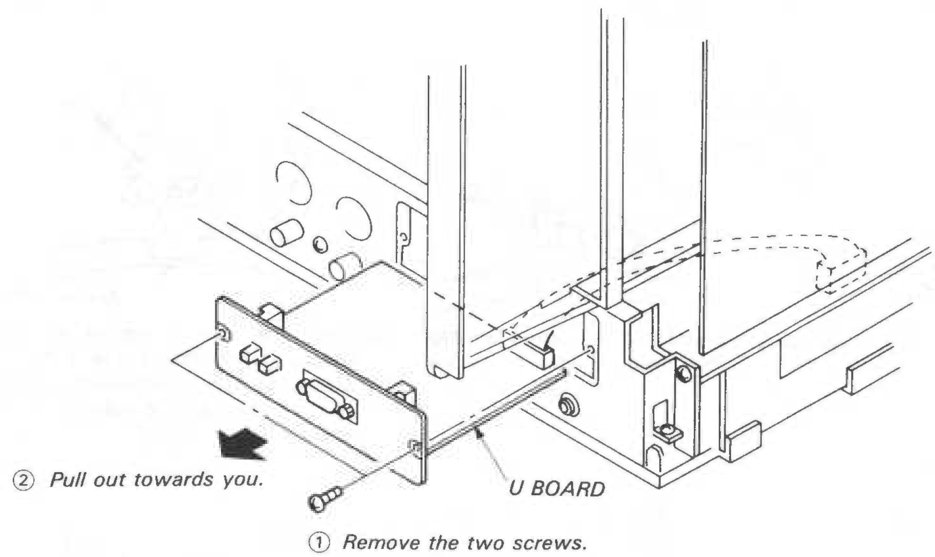
2-3. D1 AND D2 BOARDS SERVICE POSITION



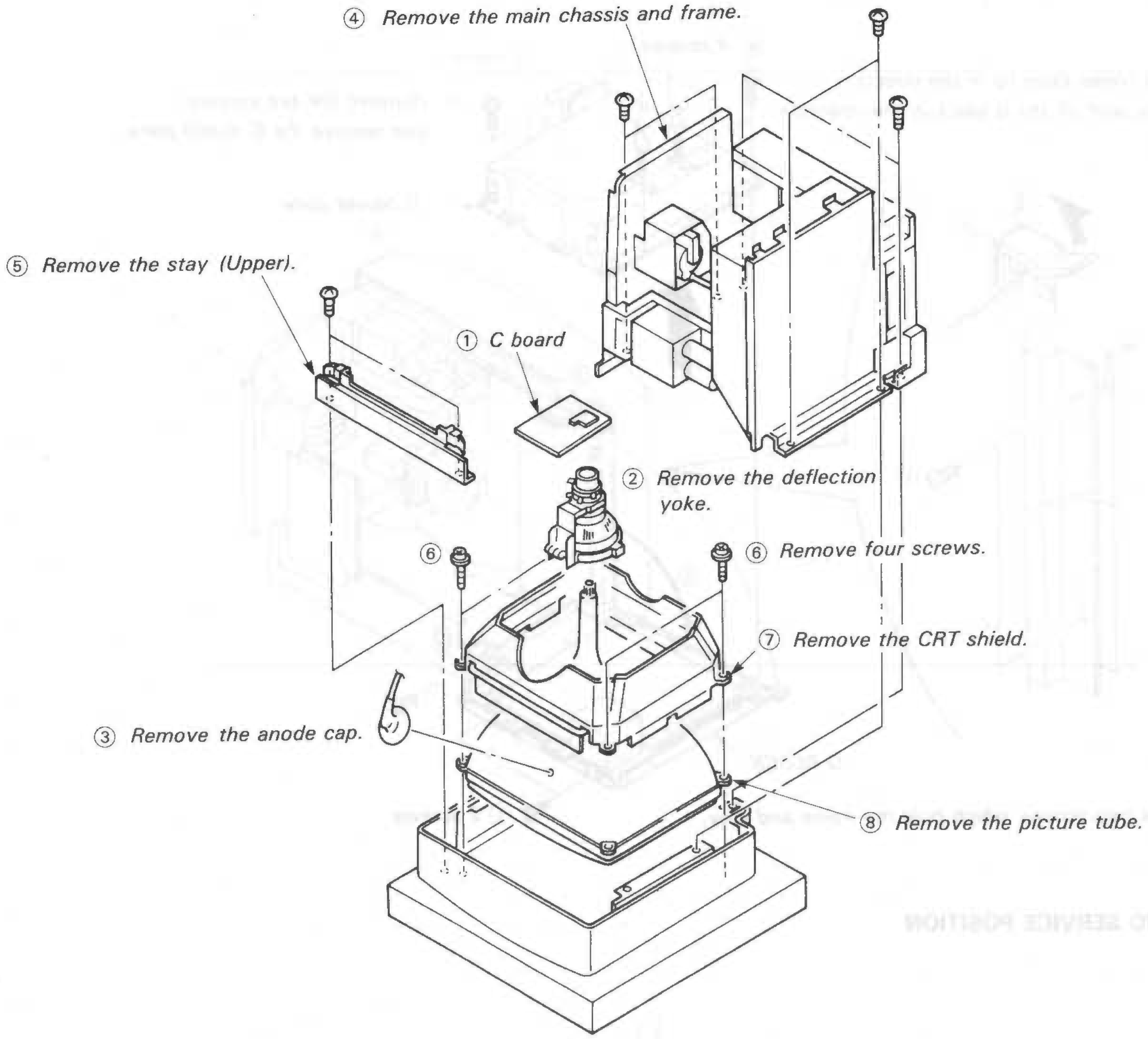
2-4. G BOARD SERVICE POSITION



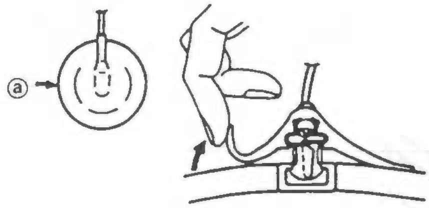
2-5. U BOARD SERVICE POSITION



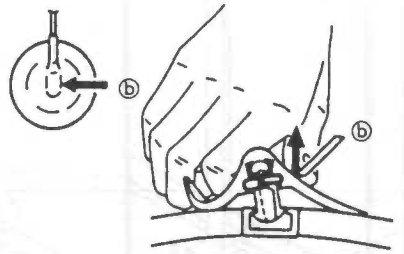
2-6. PICTURE TUBE REMOVAL



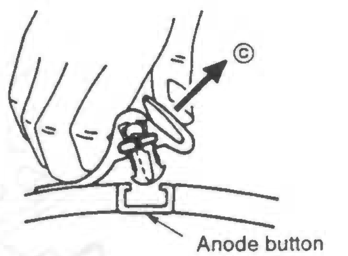
- **REMOVAL OF ANODE-CAP**
- **REMOVING PROCEDURES**



① Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ.



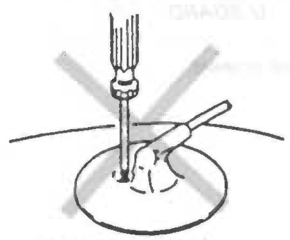
② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ.

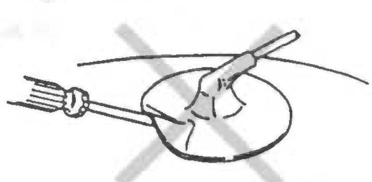


③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ⓒ.

- **HOW TO HANDLE AN ANODE-CAP**

① Don't hurt the surface of anode-caps with sharp shaped material !
② Don't press the rubber hardly not to hurt inside of anode-caps !
A metal fitting called as shatter-hook terminal is built in the rubber.
③ Don't turn the foot of rubber over hardly ! The shatter-hook terminal will stick out or hurt the rubber.


Don't hurt inside !


Don't hurt outside !

SECTION 3
SET-UP ADJUSTMENTS

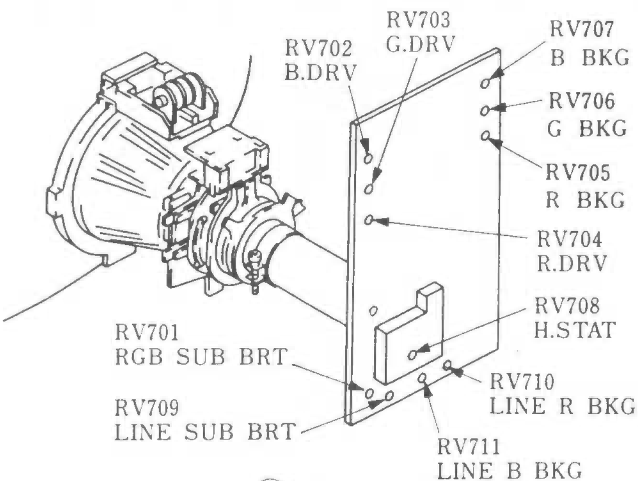
3-1. LANDING ADJUSTMENT

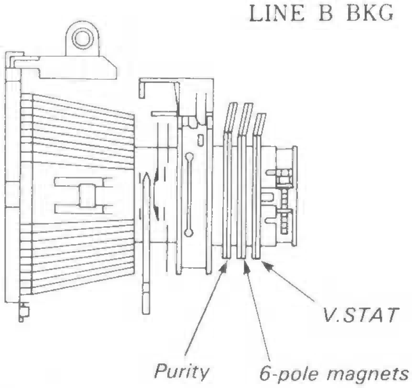
Preparations:

1. Face the set CRT surface toward the east or west in order to lessen the effect of geomagnetism.
2. Turn the set power switch on and degauss.

Adjustment:

1. Input a white signal.
2. Perform rough adjustment of white balance, screen (G2), horizontal convergence and focus. The purity adjustment knob should be at the center position at this time. (Fig. 1)
3. Set C board R BKG VR (RV705) to maximum and G BKG VR (RV706) and B BKG VR (RV707) to minimum.
4. Move the deflection yoke back and adjust the purity magnet so that the entire picture is as shown in Fig. 2.
5. Adjust so that the entire picture becomes red while moving the deflection yoke forward.
6. Use the G BKG VR (RV706) and B BKG VR (RV707) to check and adjust each color following steps 3 - 5.
7. When landing at the corners is not correct, perform magent correction (Fig. 3).
8. When the position of the deflection yoke is finalized, secure with the bracket.





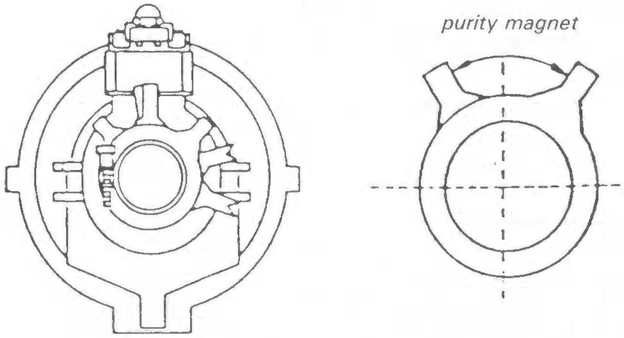


Fig. 1

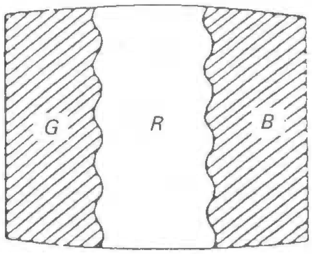


Fig. 2

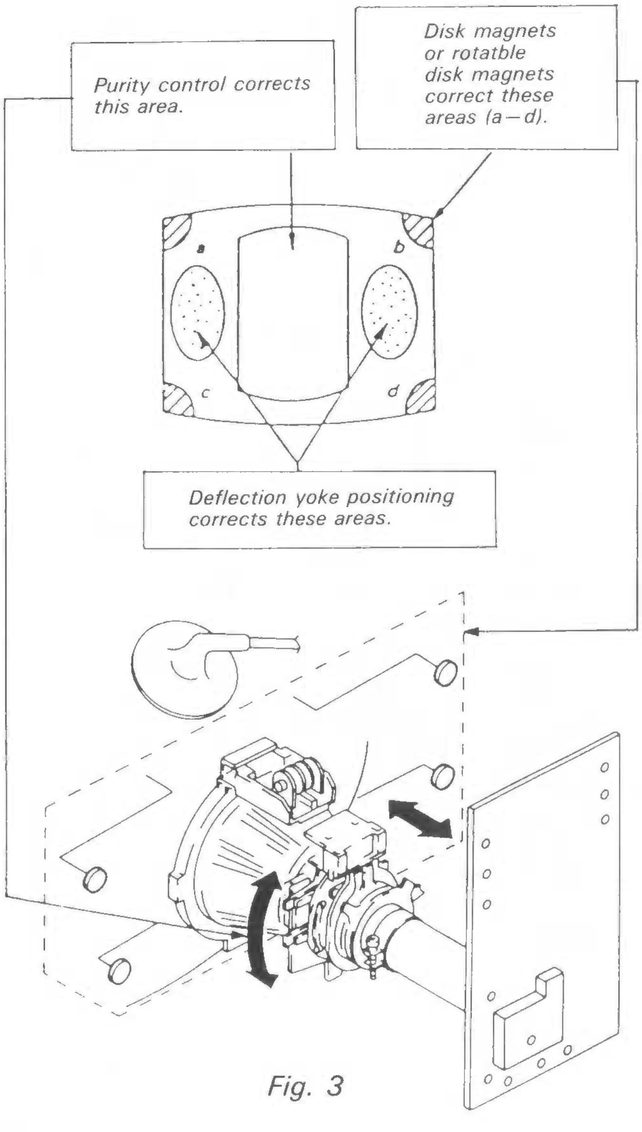


Fig. 3

3-2. DEFLECTION YOKE NECK ADJUSTMENT

Perform this adjustment when there is misconvergence and pincushon distortion at the top and bottom of the picture.

1. Tilt the deflection yoke up and down to adjust when the pincushion distortion is not the same at the top and bottom of the picture. (Fig. 4)

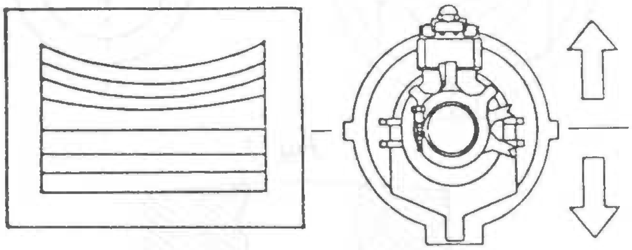


Fig. 4

2. When there is misconvergence at the top and bottom of the picture as shown in Fig. 5, tilt the deflection yoke to the left and right to adjust.

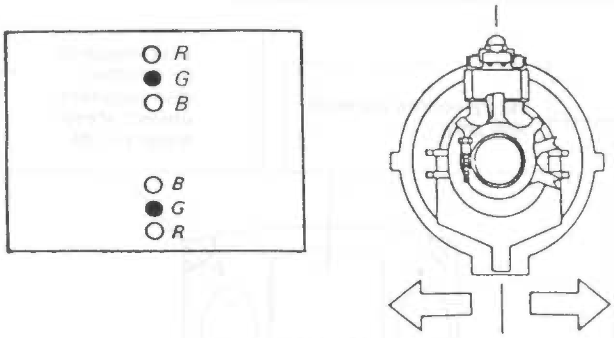
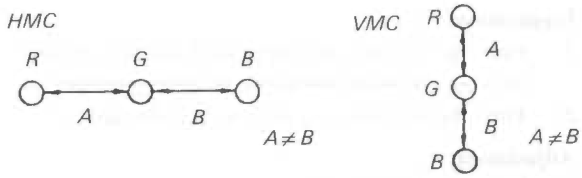


Fig. 5

1) Convergence Adjustment for Picture Center (H. STAT, V. STAT)
1. Input a dot signal, and with BRT at minimum, adjust for optimum picture with PICTURE.
2. Line up picture center nd horizontal direction RGB dots with H. STAT VR (RV703).
3. Line up picture center and vertical direction RGB dots with V. STAT magnet.

2) Picture center horizontal direction asymmetrical misconvergence (HMC)
Picture center vertical direction asymmetrical misconvergence (VMC)
4. For HMC, move the six-pole magnet to adjust so that the R and B dots are symmetrical to the right and left of the G dot.
5. For VMC, move the six-pole magnet to adjust so that the R and B dots are symmetrical above and below the G dot.



Dot Movement due to 6-pole Magnet movement

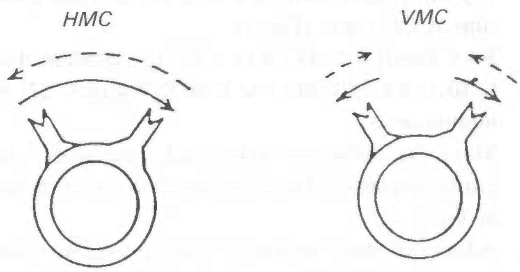
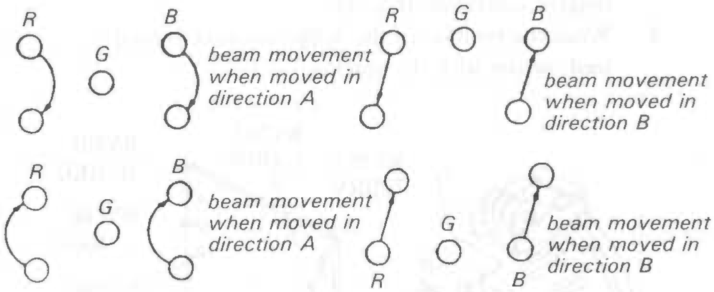
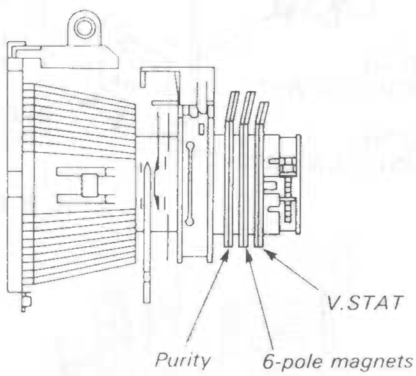


Fig. 6 Fig. 7





3) Picture Periphery Convergence Adjustment

1. For Y crosstalk, adjust with the Y crosstalk correction magnet.

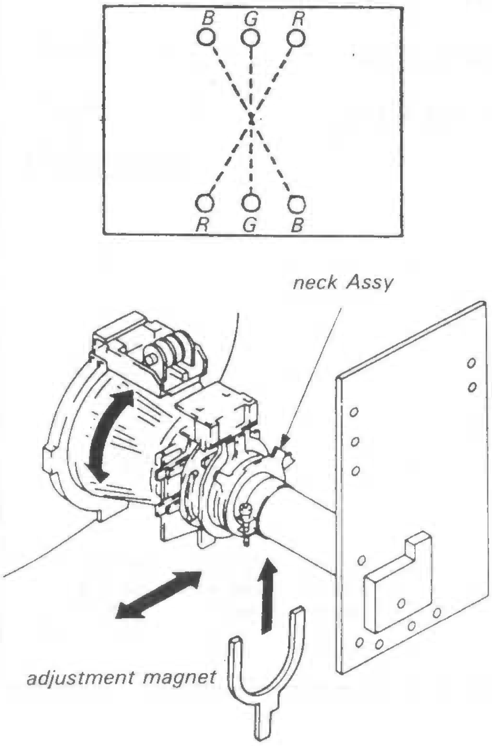


Fig. 8

2. Adjust with the X crosstalk adjustment magnet when there is H TILT.

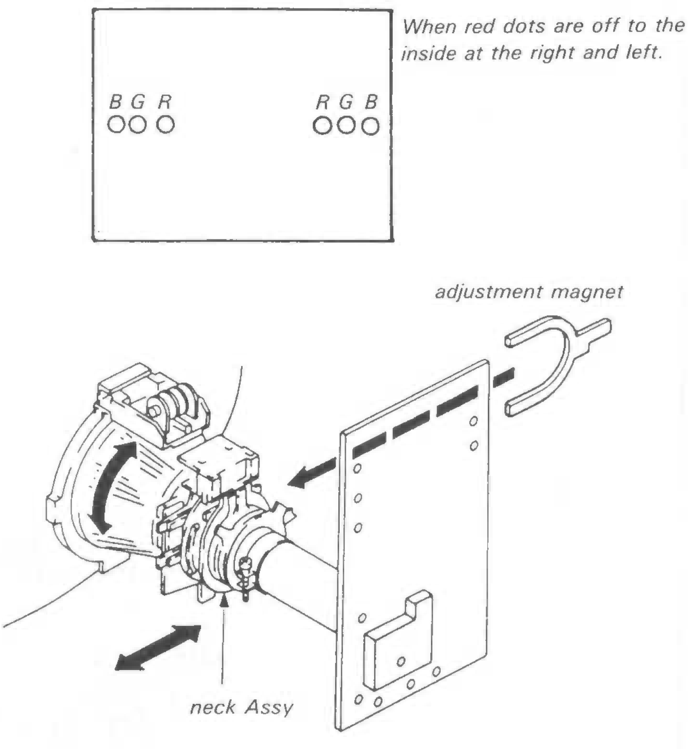
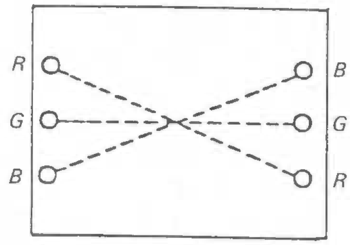
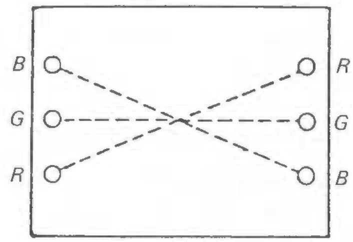


Fig. 9

3. Adjust with the deflection yoke reactor correction coil when there is X crosstalk. (Fig. 10)

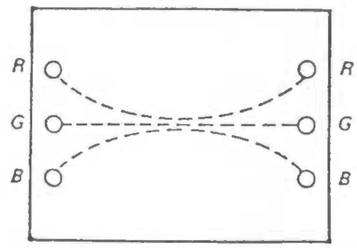


In this case adjust with coil A in Fig. 11.



In this case adjust with coil B in Fig. 11.

4. Adjust with the deflection yoke reactor correction coil when there is X bow.



In this case adjust with coil C in Fig. 11. At this time put D core in so that the marked side is on side A. (Fig. 11)
Note: Paint D core after adjustment.

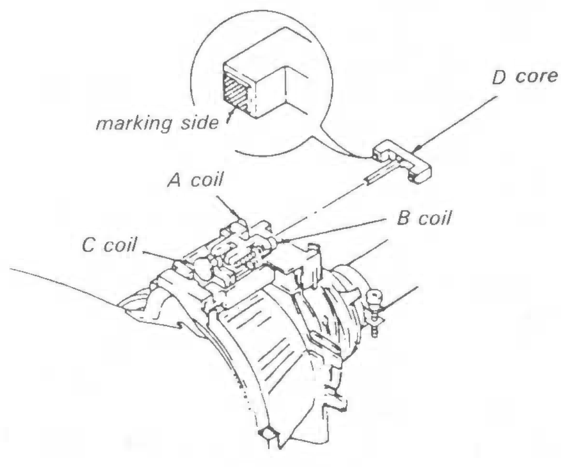


Fig. 11

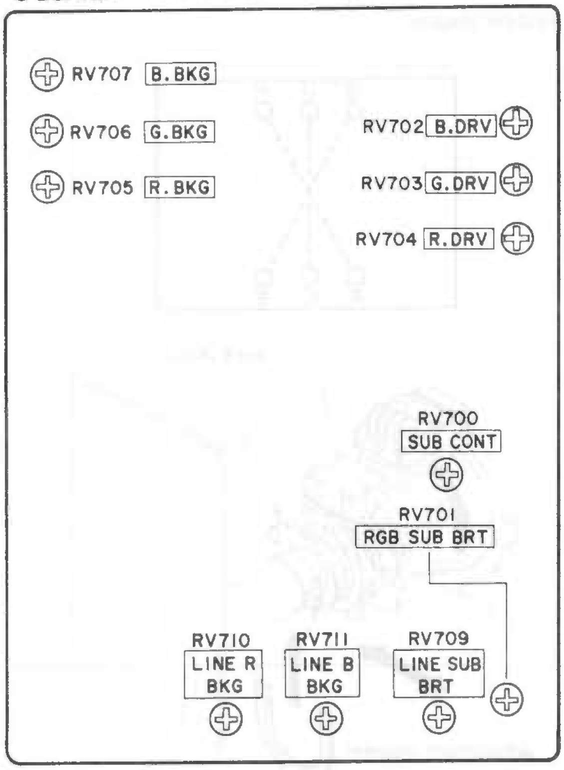
3-3. SCREEN ADJUSTMENT

(1) Input no signal at RGB mode.
(2) Set the C board VRs as shown below.
RV705 ~ 707 R. G. B. BKG: MIN.
RV710, 711 LINE R. B BKG: MIN.
RV702 ~ 704 R. G. B DRV: MAX.
RV701 RGB SUB BRT: MAX.
RV709 LINE SUB BRT: CENT.
RV700 SUB CONT: CENT.
(3) Lower the raster gradually by turning RV502 (SCREEN), and check which color remains at last.
(4) Apply 140 V from the DC power supply to the cathode corresponding to the color remaining in step 3.
(5) Adjust RV502 (SCREEN) to the point immediately before the raster is cut off.

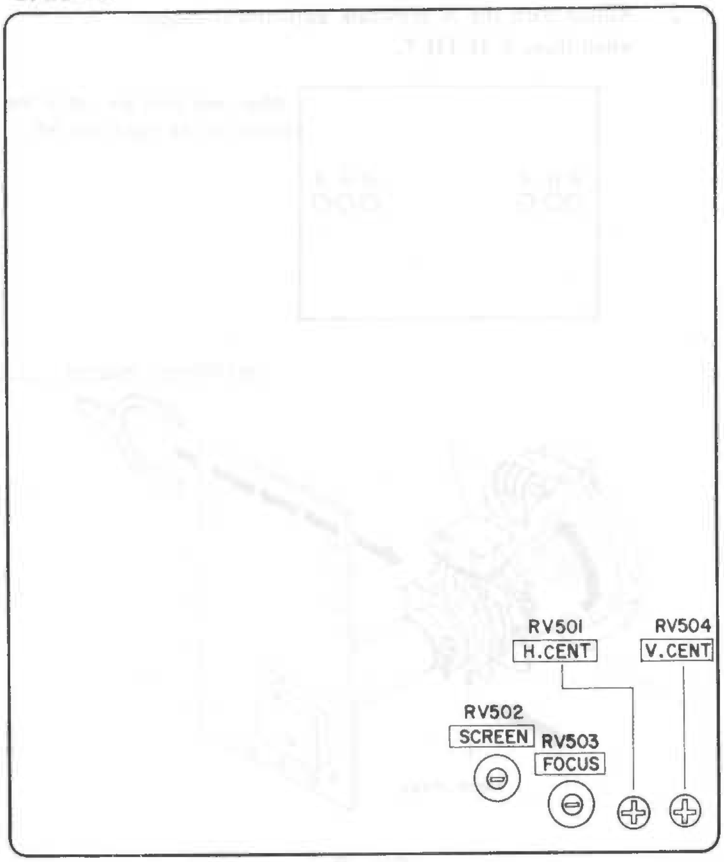
3-4. WHITE BALANCE ADJUSTMENT (1)

(1) Input an all white signnal at RGB mode, and adjust screen size with user control volume so that the all of effective screen is bright.
(2) Demagnetize the CRT with a degausser.
(3) Set trimmers as follows:
(i) RV705 (R. BKG), RV706 (G. BKG), RV707 (B. BKG) — Min.
(ii) RV704 (R. DRV), RV703 (G. DRV), RV702 (B. DRV) — Max.
(iii) RV701 (RGB SUB.BRT) ...... CENT.
(iv) RV709 (LINE SUB.BRT)...... CENT.
(v) BRT VR .... CENT
(vi) PIC .... Max.
(vii) RGB PIC .... Max.
(4) Attach the analyzer sensor to the center of the CRT.
(5) Set video signal level to 10 IRE.
0.10 ± 0.002 Vp-p (terminated at 75 ± 1%).
(6) Adjust cutoff W/B with the BKG VRs (RV705, 706, 707).
Cutoff: 3 Nit (3 ~ 4)
(7) Set video signal level to 100 IRE.
0.70 ± 0.002 Vp-p (terminated at 75 ± 1%).
(8) Adjust highlight White Balance with the DRV VRs (RV702, 703, 704).
* If a color is too bright, lower its setting.
(9) Tracking
Repeat steps 5 to 8 so that cutoff and highlight White Balance fall within the specification.
Specification: 9300°K + 8 MPCD, within 2 JND
(10) Set video signal level to 10 IRE.
0.07 ± 0.002 Vp-p (terminated at 75 ± 1%)
Adjust RGB SUB BRT with RV701 so that a slight brightness is obtained.
(11) Set video signal level to 0 IRE and confirm that a total cutoff is obtained.

C BOARD



DI BOARD

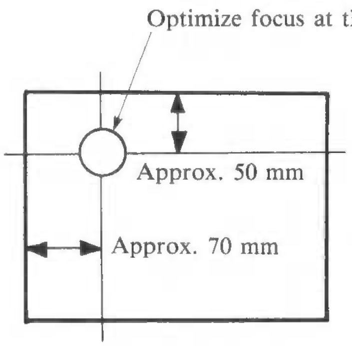


3-5. WHITE BALANCE ADJUSTMENT (2)

(1) Input a white signal to LINE A.
(2) Change the white signal level and set CRT luminance to 8 NIT.
(3) Adjust white balance with RV711 [B CUT-OFF] and RV710 [R CUTOFF].
(4) Set white signal level to 10 IRE, and adjust RV709 [SUB BRT2] so that a slight brightness is obtained. Also confirm that a total cutoff is obtained at 0 IRE.
(5) Set white signal level to 100 IRE and confirm that highlight white balance is within the specification.
(6) Input a 100-IRE window signal (H: 18μs, V: 5 ms).
(7) Adjust RV700 so that luminance of the window becomes 180±20 NIT.

3-6. FOCUS ADJUSTMENT

1) In the RGB A mode, display characters on the whole screen at fh 31.47 kHz, 60 Hz.
2) Adjust RV503 (FOCUS) so that focus is optimum at the point shown below, with the following settings: BRT center, PIC max., RGB PIC max.



3) Change to a white signal.
4) Confirm that there are no magenta rings.

SECTION 4
SAFETY RELATED ADJUSTMENTS

⧓ R1678, +B (Vcc) MAX Check

Always perform the checks below after replacing the following parts (marked ◪ on the circuit diagram).

◪ D2 board: IC1501, IC1503, IC1505, Q1502
R1503, R1504, R1507, R1508
R1509, R1510, R1511, R1516
R1519, R1521, R1522, R1534
R1540, R1541, R1546, R1565
R1642, R1653, R1673, R1678

◪ D1 board: R592, R595

◪ G board: Q907, R916, R919

1. Input 130^{+2}_{-0} V AC (distortion 3% or less).
2. In the RGB mode, receive a f_H 15.734-kHz dot-hatch signal.
3. * Contrast .... minimum
   * Bright .... minimum
4. Connect a digital multimeter to TP1502.
5. Confirm that voltage at TP1502 (Vcc) is 58.5 V or less when RV1501 on the D2 board is set to MAX.
6. Switch to a f_H 21.86-kHz dot-hatch signal and confirm that voltage at TP1502 is 80.0 V or less when RV1501 is set to MAX at the settings indicated in 3. above.
7. Switch to a f_H 31.5-kHz dot-hatch signal and confirm that voltage at TP1502 is 115 V or less when RV1501 is set to MAX at the settings indicated in 3. above.
8. In the LINE A mode, receive a dot-hatch signal and confirm that voltage at TP1502 is 62.5 V or less when RV1501 is set to MAX at the settings indicated in 3. above.
9. Switch to a f_H 21.86-kHz color-bar signal and set PIC to MAX, BRIGHT to the center, and RGB PIC to MAX.
10. Adjust RV1501 so that voltage at TP1502 becomes $77.0^{+0.5}_{-1.0}$ V.
11. In case the above specification cannot be satisfied, change the R1678 resistor rating.

⧓ R1548 Hold-down Circuit Check

Always perform the checks below after replacing the following parts (marked ◪ on the circuit diagram).

◪ D2 board: IC1502, IC1504, D1510,
R1616
R1622, R1625, R1626, R1631,
R1548, R1552, R1553, R1554
R1564

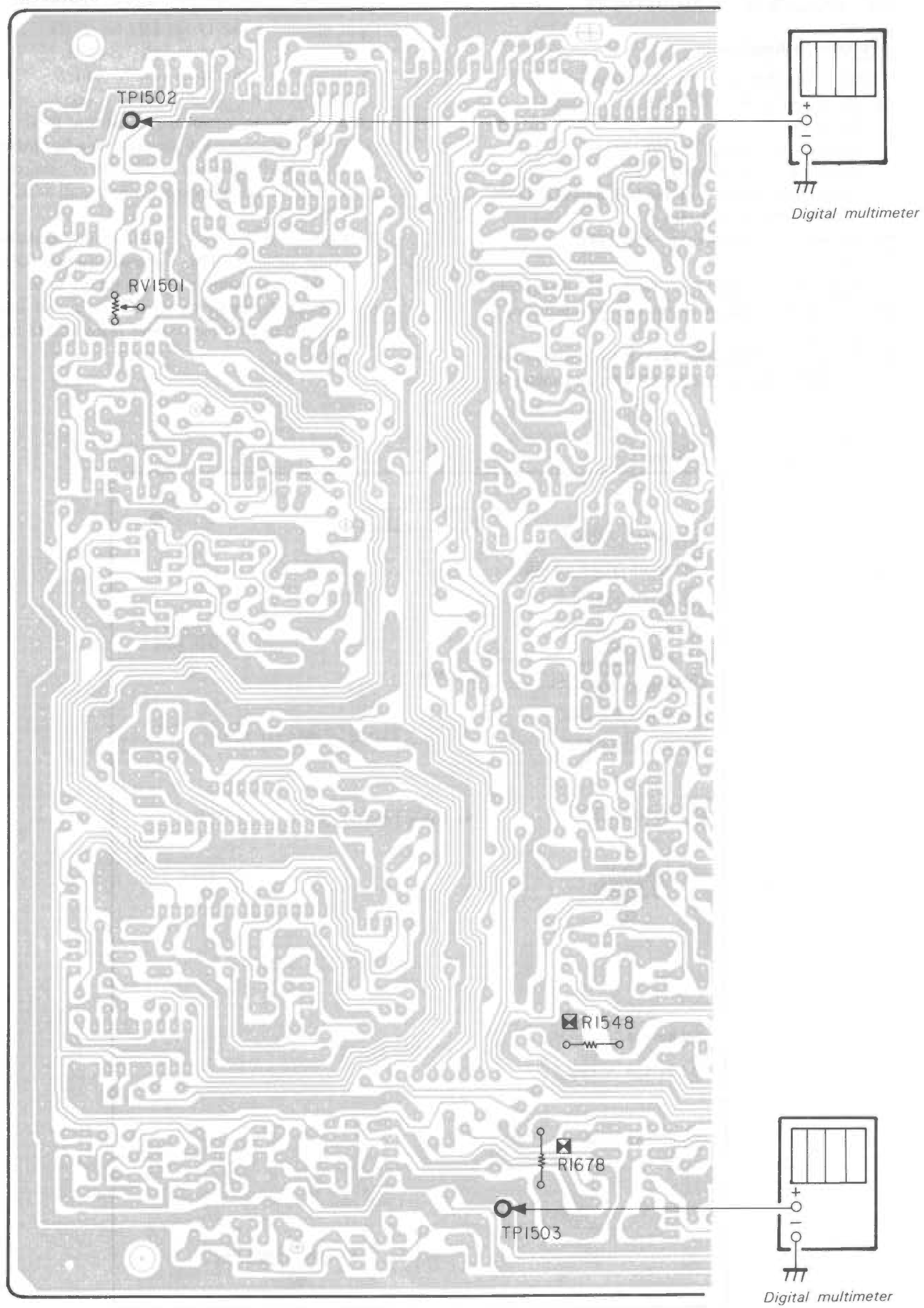
1. Receive a white signal
2. * Contrast .... maximum
   * Bright .... maximum
3. Connect a digital multimeter to TP1503.
4. Confirm that the digital multimeter voltage reading is 6.5±1.5 V DC.
5. Confirm that there is a shorting plug inserted into the D-16 connector, then connect an ammeter.
6. Set the VIDEO mode (high level at Pin ⑨ of the D-21 connector) and receive the dot-hatch signal.
7. Adjust the bright and contrast controls to minimum and set the ammeter reading to IABL = 100 ± 30 [μA].
8. Externally apply a voltage to TP1503 and confirm that the hold-down circuit operates at 8.70±0.05 V and the screen is erased.
9. In the same way, externally apply a voltage to TP1503 and confirm that the hold-down circuit does not operate at 8.20±0.05 Vdc.
10. Receive a white signal.
11. Adjust the bright and contrast controls to maximum and set the ammeter reading to IABL = 600 ± 40 [μA].
12. Externally apply a voltage to TP1503 and confirm that the hold-down circuit operates at $7.95^{+0}_{-0.05}$ V and the screen is erased.
13. In the same way, externally apply a voltage to TP1503 and confirm that the hold-down circuit does not operate at $7.55^{+0.05}_{-0}$ Vdc.
14. In case the above specifications cannot be satisfied, change the R1548 resistor rating.

HVR Check After Replacement

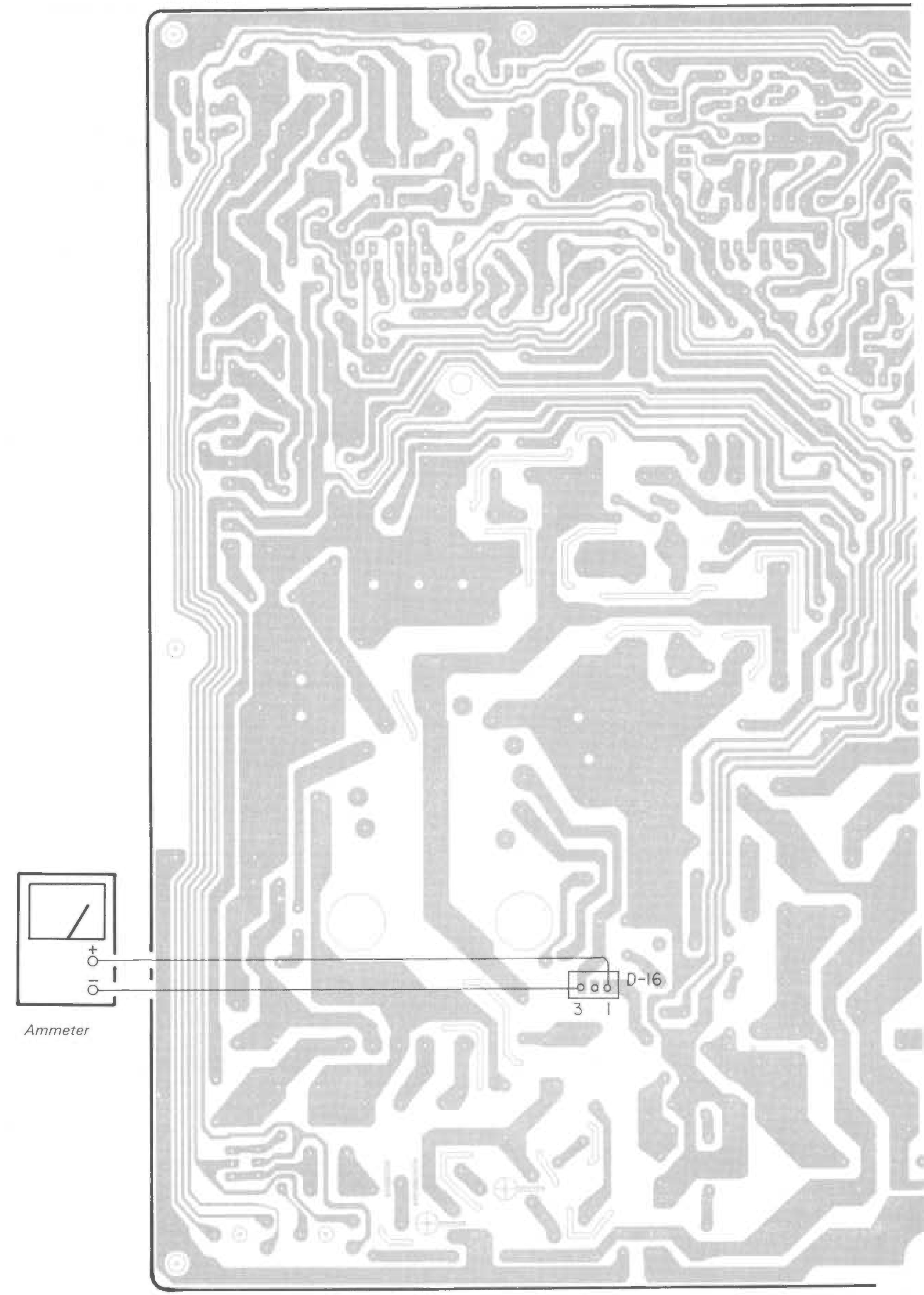
After replacing the HVR, be sure to confirm that the voltage below is being output.

1. Receive a white signal.
2. * Contrast...maximum
   * Bright...maximum
3. Connect a digital multimeter to TP1503.
4. Confirm that the digital multimeter voltage reading is 6.5 ±1.5 V DC.

D2 BOARD



D1 BOARD



MEMO

SECTION 5
CIRCUIT ADJUSTMENTS

5-1. D1, D2 BOARDS ADJUSTMENT

Vc Voltage Adjustment

* High level at Pin ⑨ of the D-21 connector

1) Input signal fH: 15.735 kHz
   fv: 60 Hz
   Measurement point: TP1501 (Vc)
   Specification: 3.50±0.05 Vdc
   If the specification is not satisfied, adjust ΔR1678 (1/4 W, 10 kΩ to 22 kΩ).
2) Switch input signals to fH: 31.47 kHz
   fv: 60 Hz
   and confirm that voltage at TP1501 is 7.0±0.1 Vdc
3) Set voltage at Pin ⑨ of the D-21 connector to 2 V or less.
4) Select ΔR1729 (1/4 W, 24 to 270 kΩ) so that voltage at TP1501 is 3.50±0.05 Vdc, and solder it.

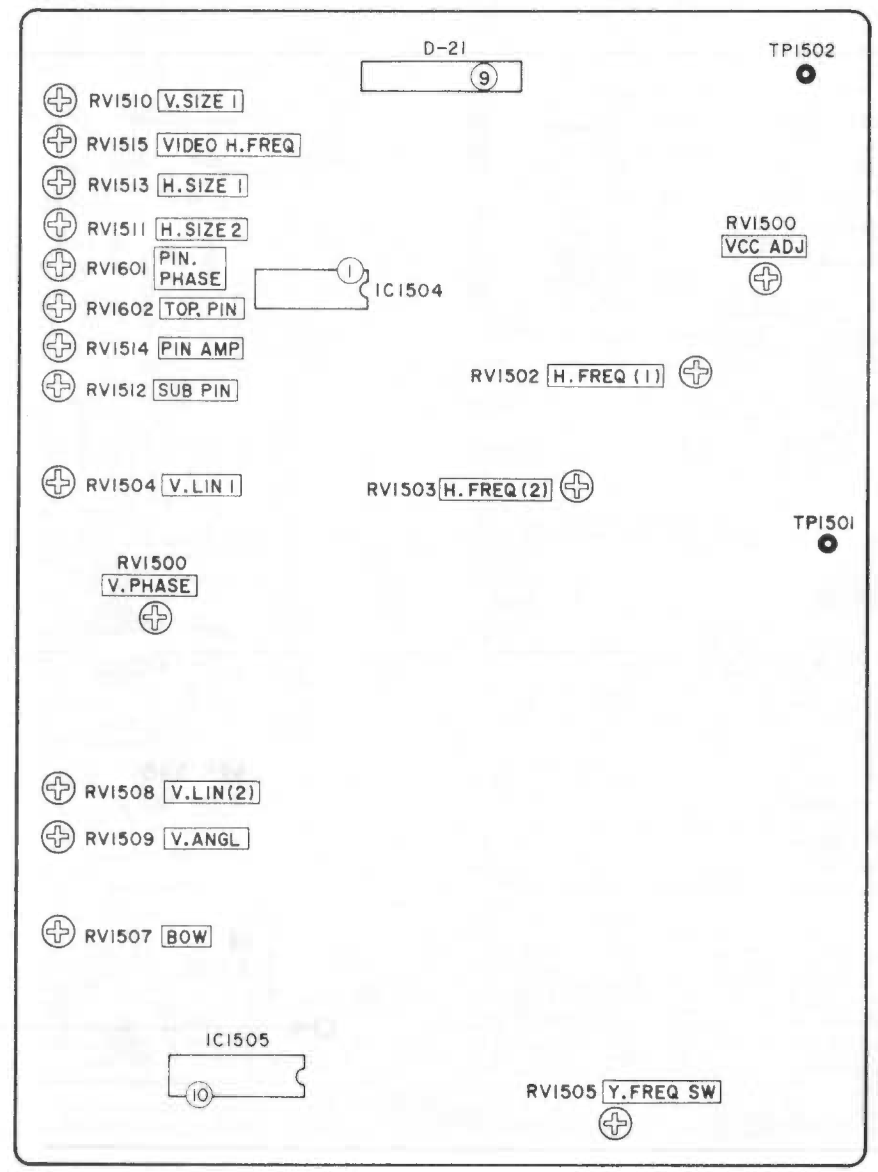
Horizontal Oscillation Frequency Adjustment

Input signals 1. fH: 15.734 kHz fv: 60 Hz
2. fH: 21.86 kHz fv: 60 Hz
3. fH: 33.00 kHz fv: 60 Hz

* High level at Pin ⑨ of the D-21 connector
* Always perform Vc voltage adjustment first.

1) Connect a 10-μF/16-V chemical capacitor between Pin ① of IC1504 and ground (D-26 connector).
2) Connect a frequency counter to Pin ⑩ of IC1505 (TP1507).
3) Confirm that RV1503 is set to the mechanical center, input signal No. 3 above and adjust RV1502 so that the counter reads 33.00±0.1 kHz.
4) Change the input to signal No. 1 and adjust RV1503 so that the counter reads 15.734±0.05 kHz.

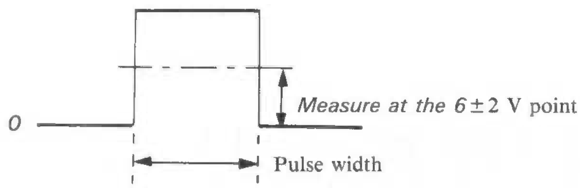
D2 Board



5) Change the input back to signal No. 3 and adjust RV1502 so that the counter reads 33.00±0.1 kHz.
6) Change the input to signal No. 2 and confirm that the counter reads 21.86±0.3 kHz.
7) Repeat steps 4 to 6 above and adjust tracking so that readings are within specifications for all three signals.
8) Change the input from RGB to VIDEO (turn level at Pin ⑦ of the D-21 connector to low) and receive a monoscope or color-bar signal.
9) Adjust RV1515 so that the counter reads 15.734±0.1 kHz.

Horizontal Drive Pulse Adjustment

1) Input a signal of fH 15.734 kHz, fv 60 Hz, monitor Pin ⑩ (TP1507) of IC1505 with an oscilloscope and adjust △R1670 (1/4 W, RN, 4.7 to 100 kΩ) so that pulse width becomes 24.0±1.5μs.
2) Change the input signal to fH 31.47 kHz, fv 60 Hz, and confirm that pulse width is 12.0±1.0μs.

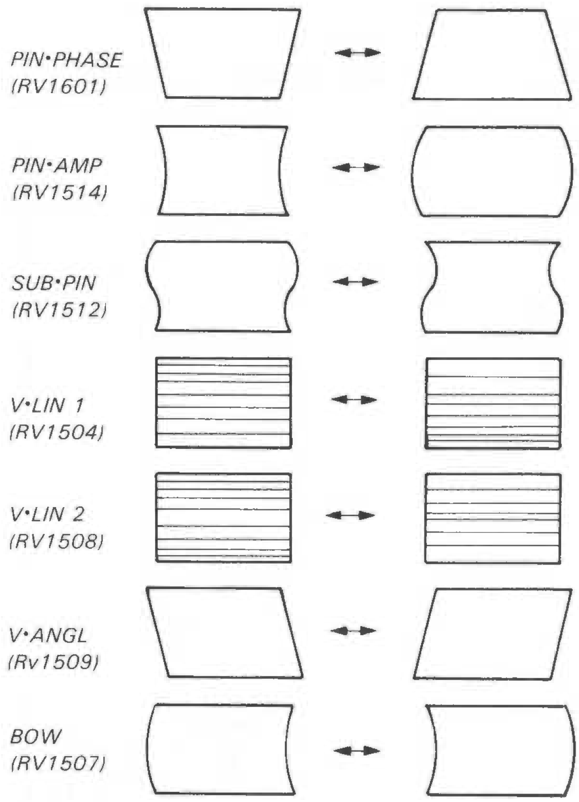


fH 15.734 kHz .... 24.0±1.5μs
31.47 kHz .... 12.0±1.0μs

Deflection Adjustment

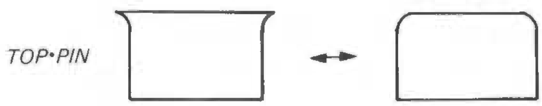
1) In the VIDEO mode, input a monoscope signal, turn the controls listed below, and confirm that they work properly.

RV1510 V·SIZE 1
RV1511 H·SIZE 2



Horizontal size specification: 15.0±0.3 frame
Vertical size specification: 11.2±0.3 frame

2) Set the RGB mode and input a dot-hatch signal of fH 21.86 kHz and fv 60 Hz.
3) Coarsely adjust RV1513 (H-SIZE 1) and RV1602 (TOP-PIN). Reduce horizontal size by turning H-SIZE 1, and stop immediately before pincushion distortion appears.

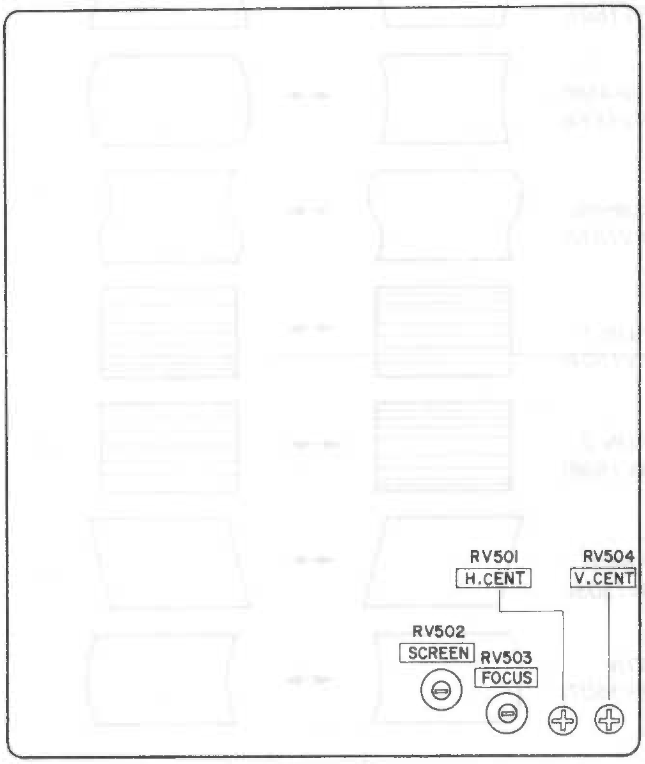


Note: When adjusting H-SIZE 1, be sure to set the H-SIZE user control to the minimum position.

4) Turn the controls below and confirm that they work properly. Then return them to their mechanical centers.

RV501 H•CENT
RV504 V•CENT
RV502 SCREEN
RV503 FOCUS

D1 Board



Vertical Sync Frequency Recognition Circuit Adjustment

* High level at Pin ⑨ of the D-21 connector

1) In the RGB mode, input a signal of f_H 15.7 kHz and fv 64 kHz.
2) Adjust RV1505 to the exact point where vertical size is enlarged.

+B (Vcc) Adjustment

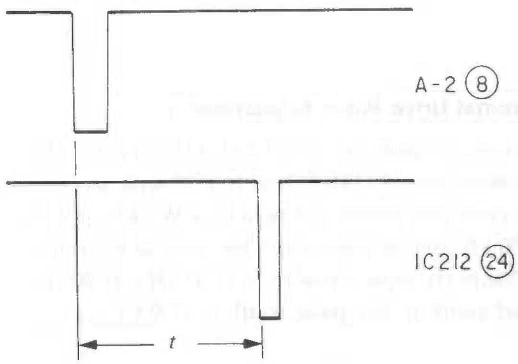
* High level at Pin ⑨ of the D-21 connector

1) Input a color-bar signal of f_H 21.8 kHz and fv 60 Hz.
2) Adjust RV1501 so that voltage at TP1502 (Vcc) becomes $77.0^{+0.5}_{-1.0}$ Vdc.

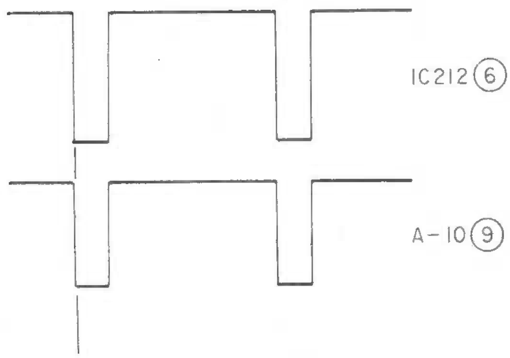
5-2. A BOARD ADJUSTMENT

Input a signal to RGB A.

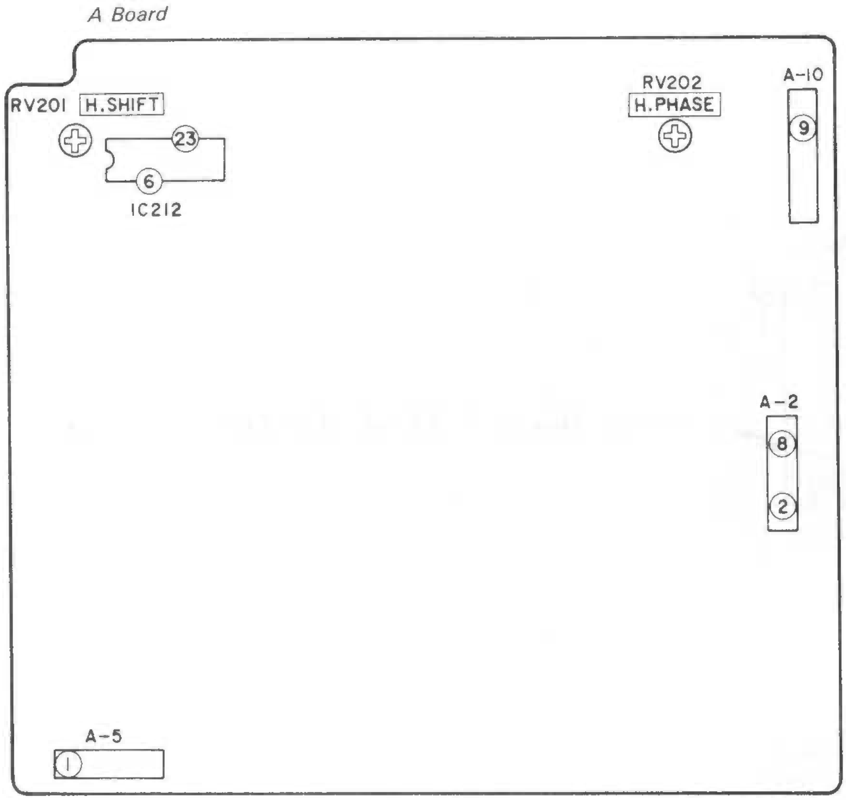
(1) Press RGB A.
(2) Confirm that a voltage of 12 V±5 V is output to Pin ② of A-2.
(3) Set f_H to 33.00 kHz±0.05 kHz (negative polarity sync).
(4) Monitor Pin ⑧ of A-2 and Pin ㉓ of IC212, and adjust RV201 [H.SHIFT] on the A board to t = 24.5μs ± 0.1μs in the figure below.



(5) Press LINE A.
(6) Input a monoscope signal to LINE A.
(7) Monitor Pin ⑥ of IC212 and Pin ⑨ of A-10.
(8) Adjust RV202 [H.PHASE] on the A board so that both sync leading edges match in the figure below.



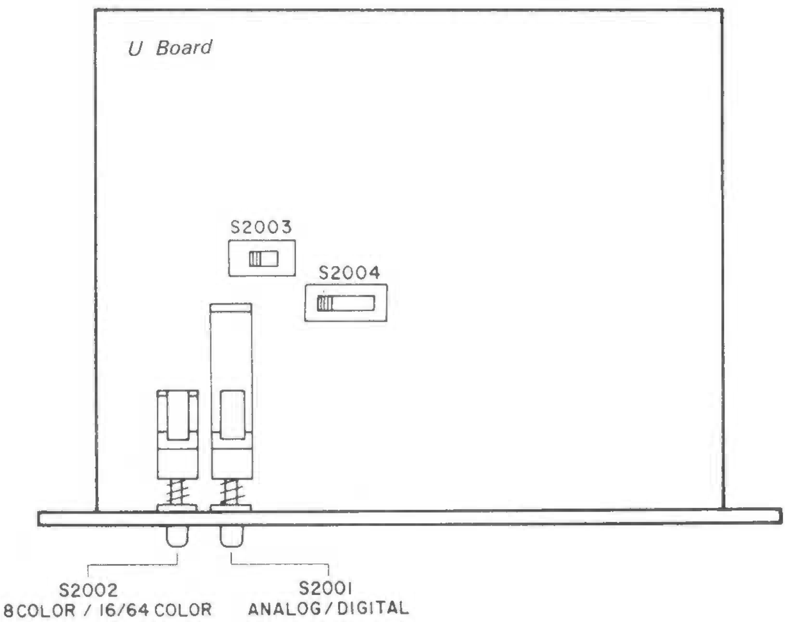
Match both leading edges.

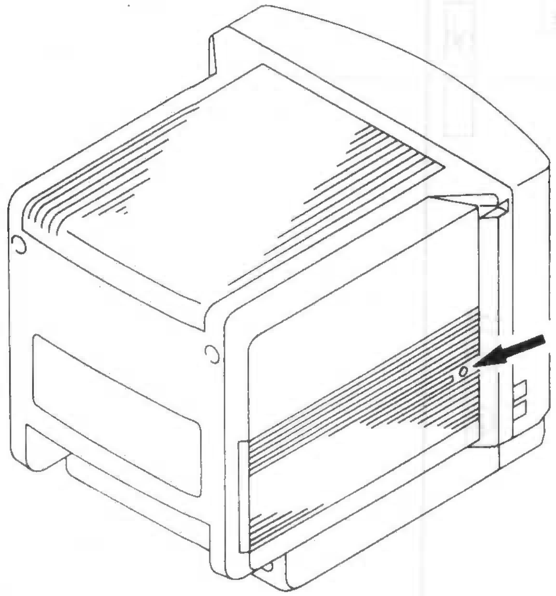


Service Switches on the U Board

Normally, when a digital signal is input, differentiation between MDA (monochrome), CGA (16 colors) and EGA (64 colors) can be performed automatically according to sync polarity by setting S1 to 16/64 COLOR. When automatic differentiation is not possible due to signal condition, S2004 is used. S2004 is normally set to the "8" position at the factory. Change it to 16, 64 or MONO. Then switch S1 to the 8 COLOR position (S1 can be switched between 8 COLOR and 16/64 COLOR, but the display mode when set to 8 COLOR can actually be selected with S2004).

S2003, on the other hand, is used to switch display color in the monochrome mode between green and amber. It is normally set to the green position at the factory.



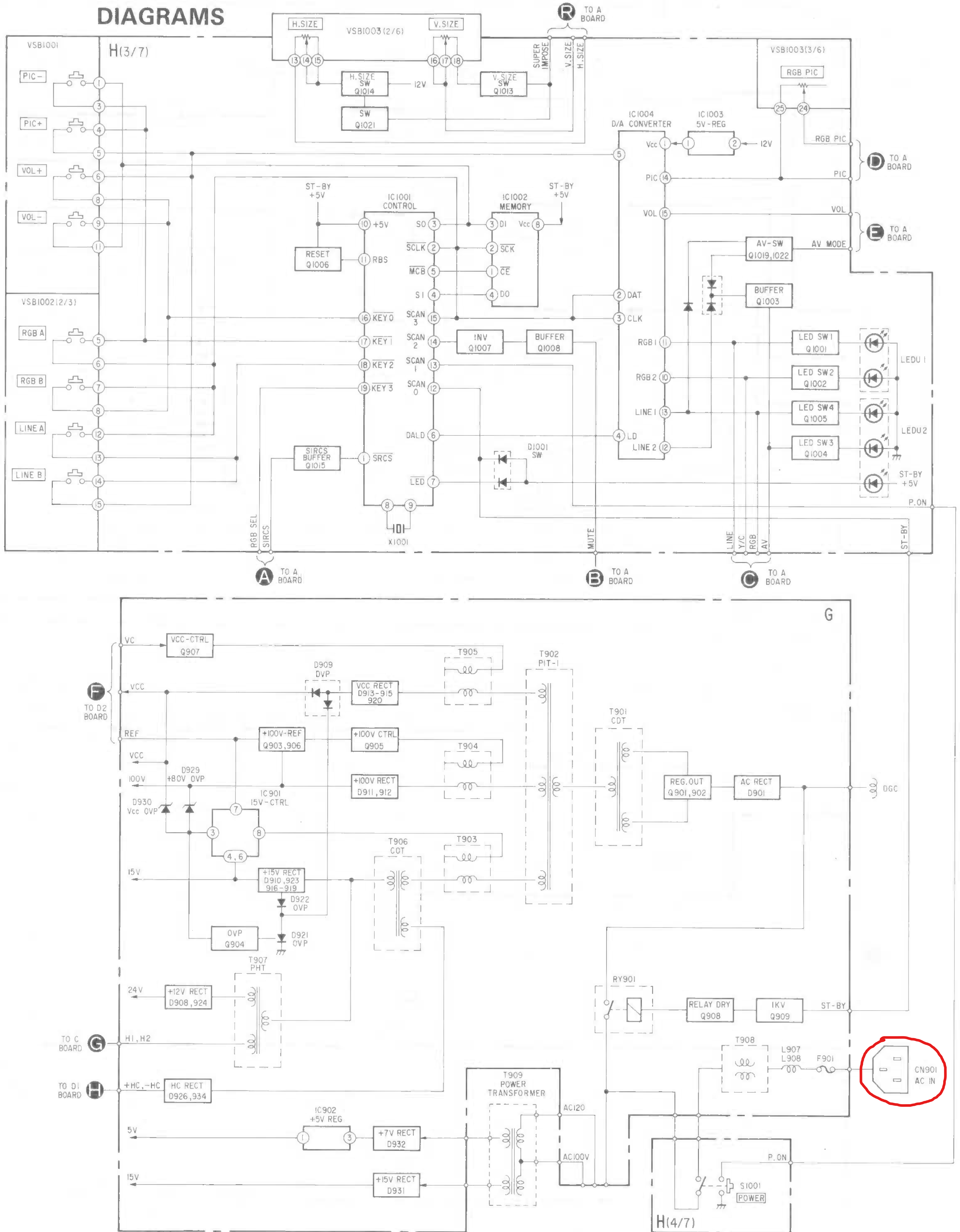


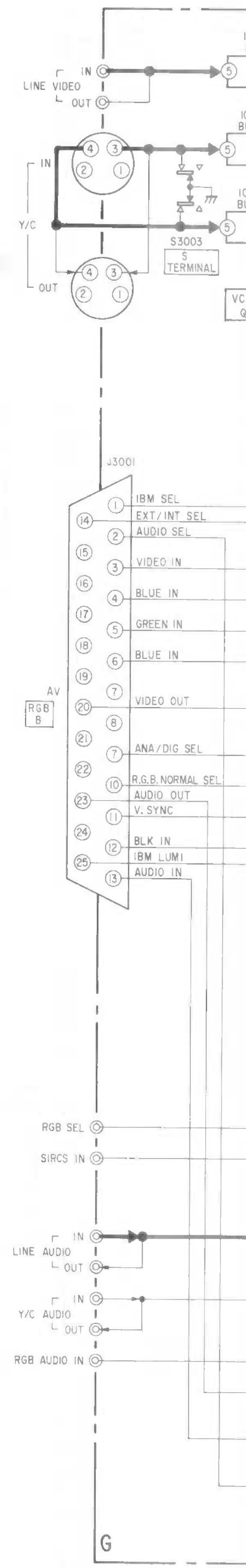
About the Hole on the left side of the Unit

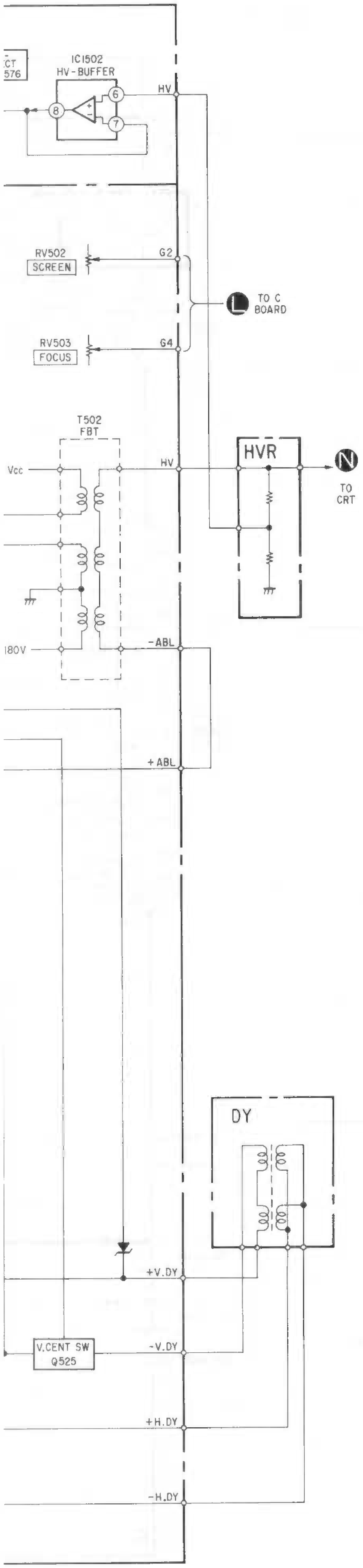
Depending on the input signal, pincushion distortion may occur (this is likely when connecting a NEC PC-9801 or Apple MAC II computer, etc.). In that case, insert a 2-mm screwdriver into the hole on the left side of the unit and turn it to correct distortion.

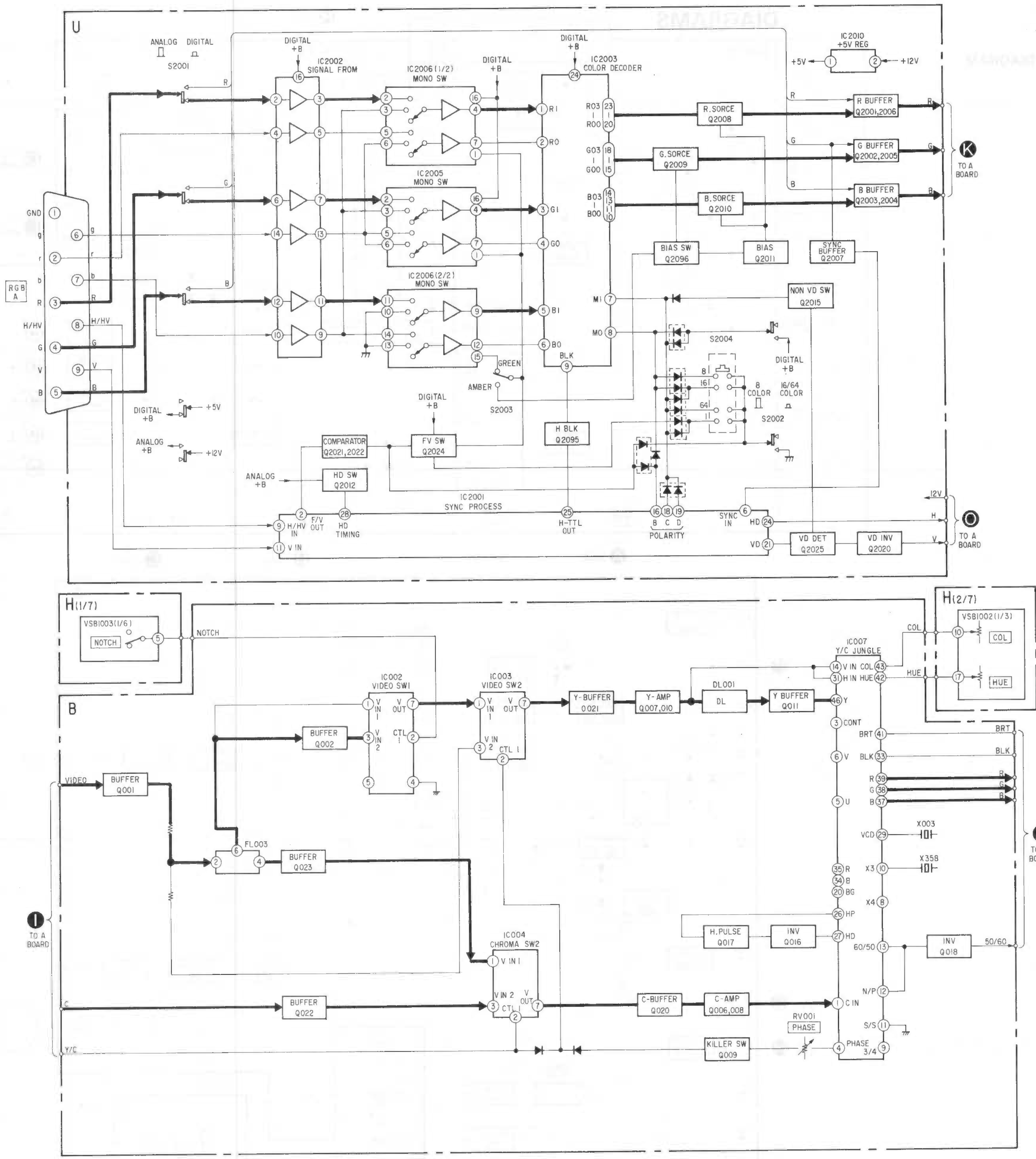
SECTION 6 DIAGRAMS

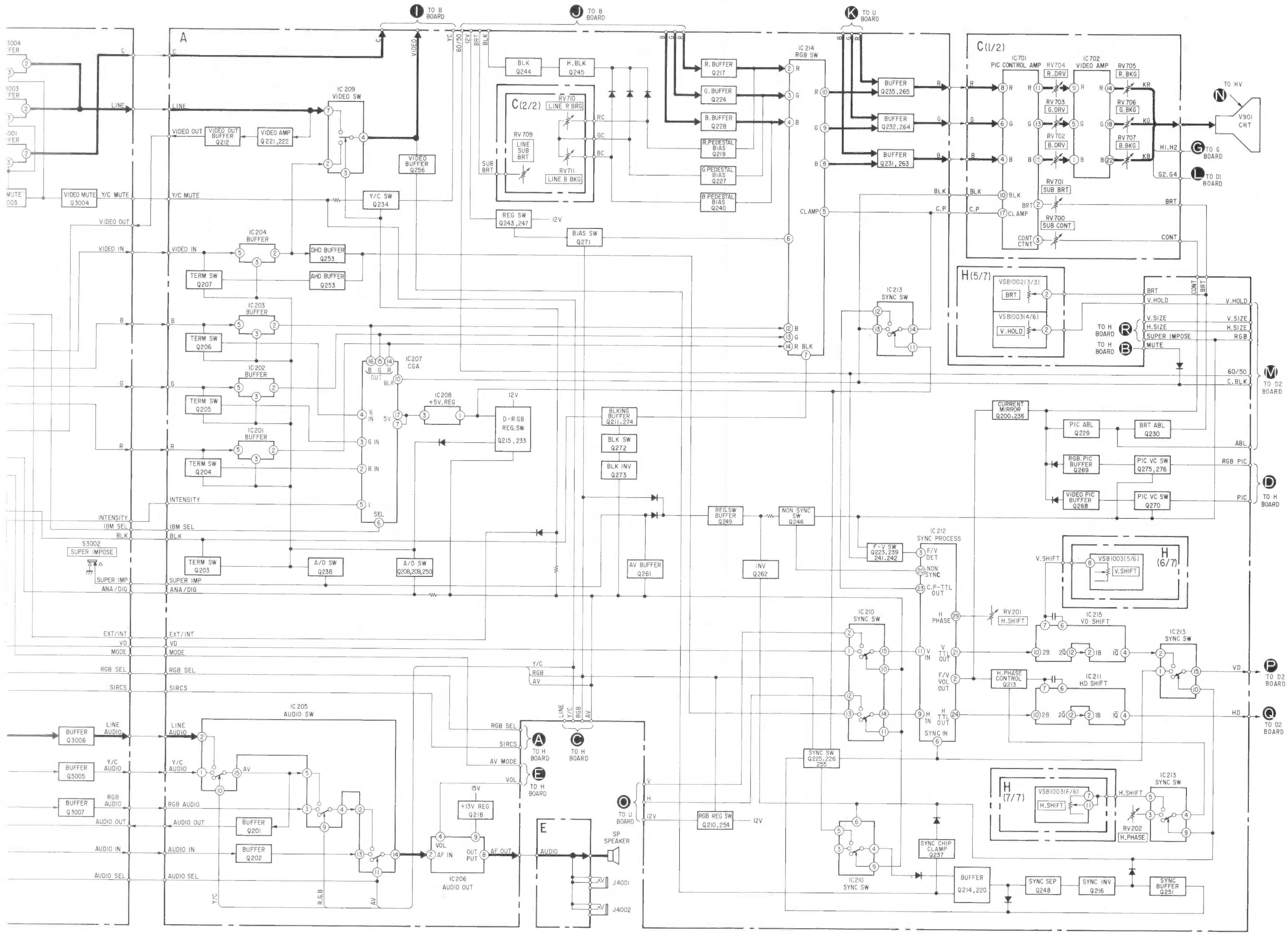
6-1. BLOCK DIAGRAM

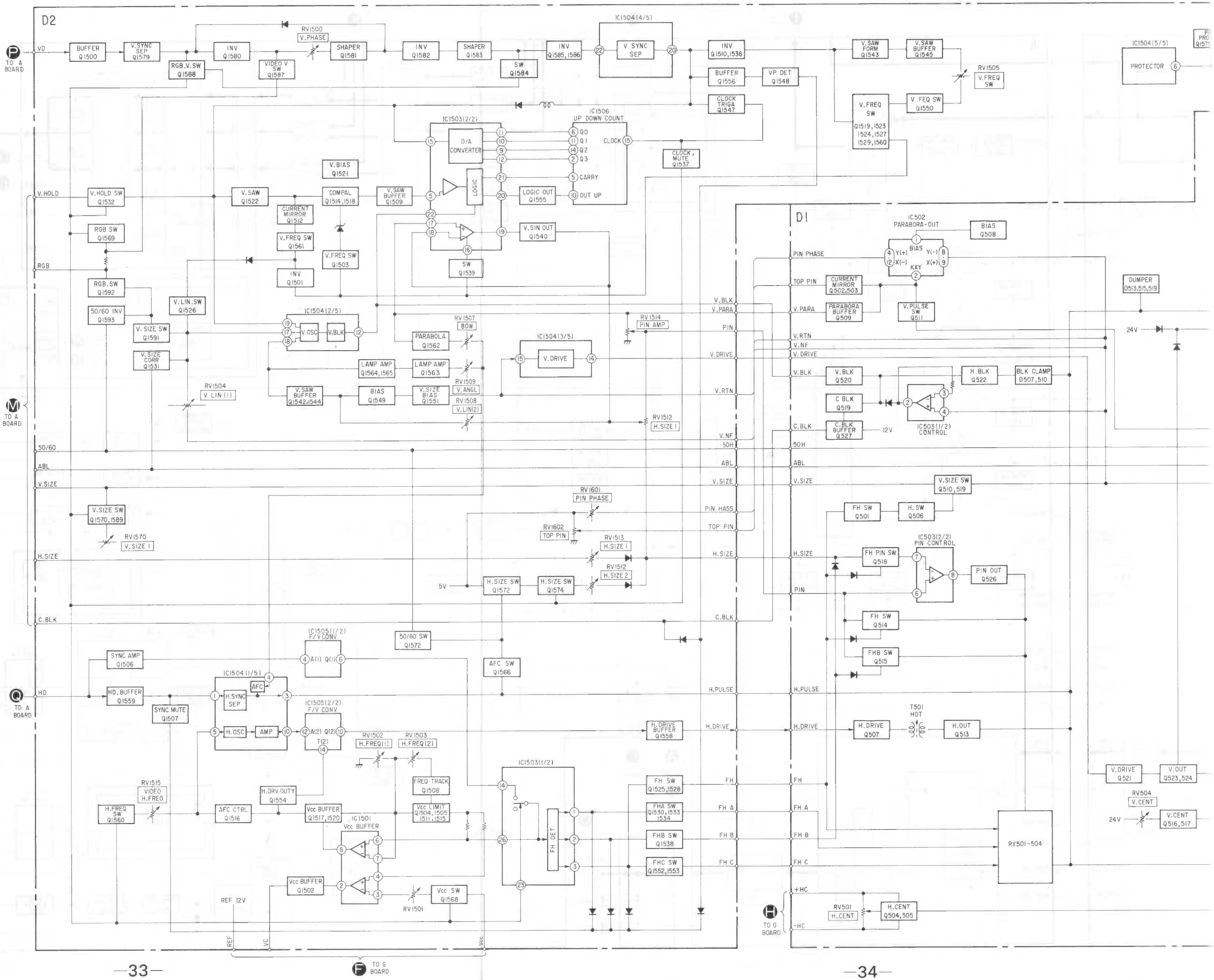




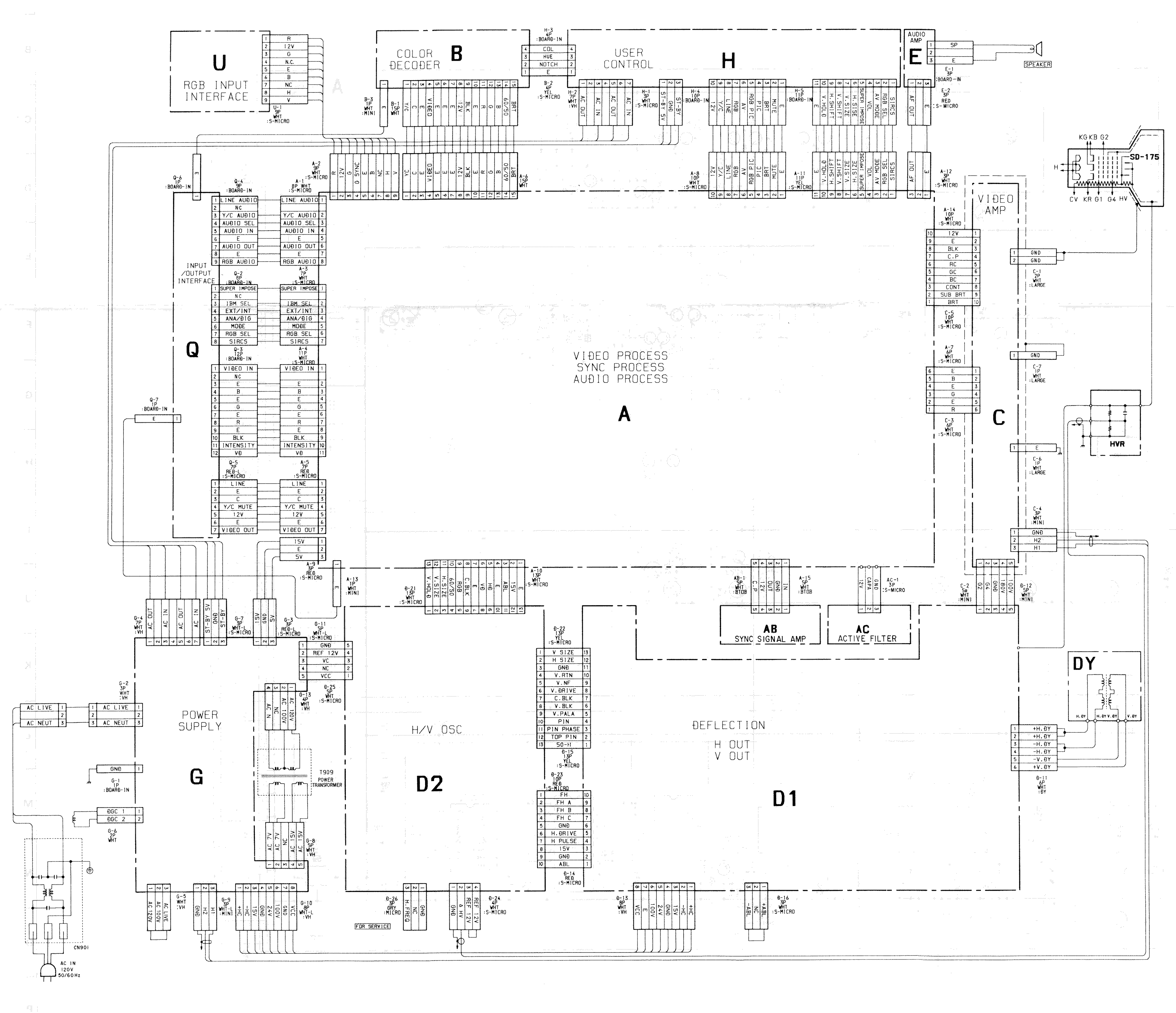

IC1502
HV-BUFFER
HV
RV502
SCREEN
G2
RV503
FOCUS
G4
TO C BOARD
T502
FBT
Vcc
180V
HVR
TO CRT
-ABL
+ABL
DY
+V.DY
-V.DY
+H.DY
-H.DY
V.CENT SW
Q525


U
ANALOG DIGITAL
S2001
IC2002
SIGNAL FROM
IC2006(1/2)
MONO SW
IC2005
MONO SW
IC2006(2/2)
MONO SW
IC2003
COLOR DECODER
IC2010
+5V REG
R.SORCE
Q2008
G.SORCE
Q2009
B.SORCE
Q2010
R BUFFER
Q2001,2006
G BUFFER
Q2002,2005
B BUFFER
Q2003,2004
TO A BOARD
BIAS SW
Q2096
BIAS
Q2011
SYNC BUFFER
Q2007
NON VD SW
Q2015
S2004
S2002
S2003
GREEN
AMBER
H BLK
Q2095
FV SW
Q2024
COMPARATOR
Q2021,2022
HD SW
Q2012
IC2001
SYNC PROCESS
POLARITY
VD DET
Q2025
VD INV
Q2020
RGB A
H(1/7)
VSB1003(1/6)
NOTCH
H(2/7)
VSB1002(1/3)
COL
HUE
B
IC002
VIDEO SW1
IC003
VIDEO SW2
BUFFER
Q002
BUFFER
Q001
FL003
BUFFER
Q023
BUFFER
Q022
IC004
CHROMA SW2
Y-BUFFER
Q021
Y-AMP
Q007,010
DL001
DL
Y BUFFER
Q011
IC007
Y/C JUNGLE
H.PULSE
Q017
INV
Q016
INV
Q018
C-BUFFER
Q020
C-AMP
Q006,008
KILLER SW
Q009
RV001
PHASE
X003
X358
VIDEO
Y/C

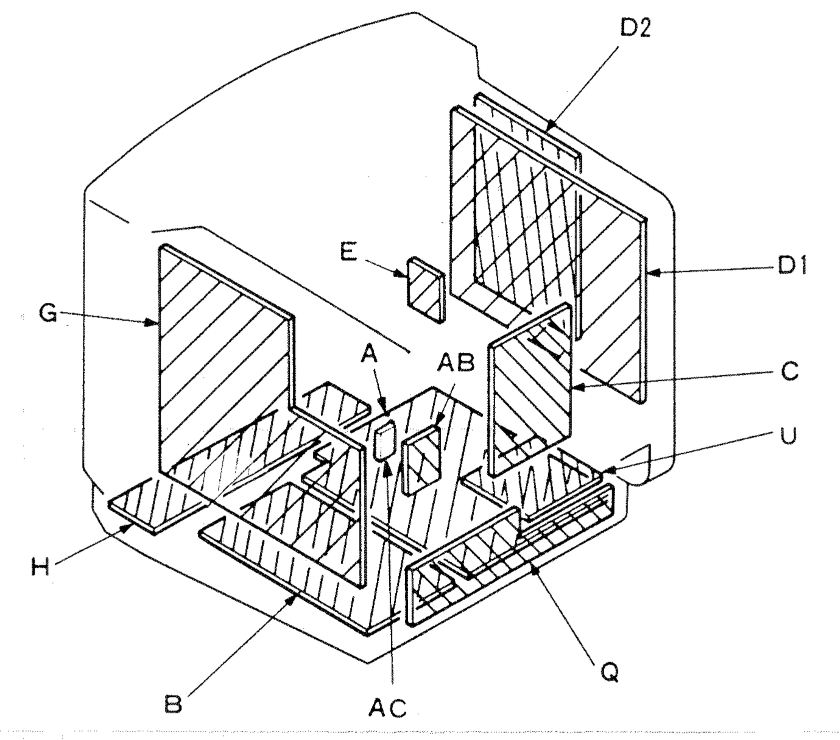

A
IC209 VIDEO SW
VIDEO OUT BUFFER Q212
VIDEO AMP Q221,222
VIDEO BUFFER Q256
VIDEO MUTE Q3004
Y/C SW Q234
IC204 BUFFER
DHD BUFFER Q253
AHD BUFFER Q253
TERM SW Q207
IC203 BUFFER
TERM SW Q206
IC202 BUFFER
TERM SW Q205
IC201 BUFFER
TERM SW Q204
IC207 CGA
IC208 +5V REG
D-RGB REG.SW Q215,233
TERM SW Q203
A/D SW Q238
A/D SW Q208,209,250
S3002 SUPER IMPOSE
BLK Q244
H.BLK Q245
C(2/2)
RV709 LINE SUB BRT
RV710 LINE R BRG
RV711 LINE B BKG
REG SW Q243,247
BIAS SW Q271
R.BUFFER Q217
G.BUFFER Q224
B.BUFFER Q228
R.PEDESTAL BIAS Q219
G.PEDESTAL BIAS Q227
B.PEDESTAL BIAS Q240
IC214 RGB SW
BUFFER Q235,265
BUFFER Q232,264
BUFFER Q231,263
C(1/2)
IC701 PIC CONTROL AMP
IC702 VIDEO AMP
RV704 R.DRV
RV703 G.DRV
RV702 B.DRV
RV705 R.BKG
RV706 G.BKG
RV707 B.BKG
RV701 SUB BRT
RV700 SUB CONT
V901 CRT
TO HV
TO G BOARD
TO D1 BOARD
TO B BOARD
TO U BOARD
H(5/7)
VSB1002(3/3) BRT
VSB1003(4/6) V.HOLD
TO H BOARD
TO D2 BOARD
IC213 SYNC SW
BLKING BUFFER Q211,274
BLK SW Q272
BLK INV Q273
AV BUFFER Q261
REG.SW BUFFER Q249
NON SYNC SW Q246
INV Q262
CURRENT MIRROR Q200,236
PIC ABL Q229
BRT ABL Q230
RGB PIC BUFFER Q269
PIC VC SW Q275,276
VIDEO PIC BUFFER Q268
PIC VC SW Q270
F-V SW Q223,239 241,242
IC212 SYNC PROCESS
H(6/7)
VSB1003(5/6) V.SHIFT
RV201 H.SHIFT
IC215 VD SHIFT
IC211 HD SHIFT
H.PHASE CONTROL Q213
IC210 SYNC SW
SYNC SW Q225,226 255
H(7/7)
VSB1003(6/6) H.SHIFT
RV202 H.PHASE
SYNC CHIP CLAMP Q237
BUFFER Q214,220
SYNC SEP Q248
SYNC INV Q216
SYNC BUFFER Q251
IC205 AUDIO SW
BUFFER Q3006
BUFFER Q3005
BUFFER Q3007
BUFFER Q201
BUFFER Q202
+13V REG Q218
IC206 AUDIO OUT
E
SP SPEAKER
J4001
J4002
RGB REG SW Q210,254
LINE AUDIO
Y/C AUDIO
RGB AUDIO
AUDIO OUT
AUDIO IN
AUDIO SEL
EXT/INT
VD
MODE
RGB SEL
SIRCS
INTENSITY
IBM SEL
BLK
SUPER IMP
ANA/DIG
VIDEO OUT
VIDEO IN
Y/C MUTE
LINE
HD
V.HOLD
V.SIZE
H.SIZE
RGB
60/50
C.BLK
ABL
RGB PIC
PIC


D2
D1
TO A BOARD
TO G BOARD
BUFFER Q1500
V.SYNC SEP Q1579
RGB.V.SW Q1588
INV Q1580
VIDEO V SW Q1587
RV1500 V.PHASE
SHAPER Q1581
INV Q1582
SHAPER Q1583
SW Q1584
INV Q1585,1586
IC1504(4/5)
V SYNC SEP
INV Q1510,1536
BUFFER Q1556
VP DET Q1548
CLOCK TRIGA Q1547
CLOCK, MUTE Q1537
IC1506 UP DOWN COUNT
IC1503(2/2)
D/A CONVERTER
LOGIC
LOGIC OUT Q1555
V.SIN OUT Q1540
SW Q1539
V.SAW FORM Q1543
V.SAW BUFFER Q1545
RV1505 V.FREQ SW
V.FREQ SW Q1519,1523 1524,1527 1529,1560
V.FEQ SW Q1550
IC1504(5/5)
PROTECTOR
V.HOLD SW Q1532
RGB SW Q1569
RGB.SW Q1592
50/60 INV Q1593
V.SIZE SW Q1591
V.SIZE CORR Q1531
V.LIN.SW Q1526
RV1504 V LIN (1)
V.SAW Q1522
V.BIAS Q1521
COMPAL Q1514,1518
CURRENT MIRROR Q1512
V.FREQ SW Q1561
V.FREQ SW Q1503
INV Q1501
V.SAW BUFFER Q1509
IC1504(2/5)
V.OSC
V.BLK
PARABOLA Q1562
LAMP AMP Q1564,1565
LAMP AMP Q1563
V.SAW BUFFER Q1542,1544
BIAS Q1549
V.SIZE BIAS Q1551
RV1507 BOW
RV1509 V.ANGL
RV1508 V.LIN(2)
IC1504(3/5)
V.DRIVE
RV1514 PIN AMP
RV1512 H.SIZE 1
V.HOLD
RGB
50/60
ABL
V.SIZE
H.SIZE
C.BLK
HD
V.SIZE SW Q1570,1589
RV1570 V.SIZE 1
RV1601 PIN PHASE
RV1602 TOP PIN
RV1513 H.SIZE 1
RV1512 H.SIZE 2
H.SIZE SW Q1572
H.SIZE SW Q1574
5V
50/60 SW Q1572
AFC SW Q1566
IC1505(1/2) F/V CONV
SYNC AMP Q1506
HD.BUFFER Q1559
SYNC MUTE Q1507
IC1504(1/5)
H.SYNC SEP
AFC
H.OSC
AMP
IC1505(2/2) F/V CONV
RV1502 H.FREQ(1)
RV1503 H.FREQ(2)
FREQ TRACK Q1508
Vcc LIMIT Q1504,1505 1511,1515
RV1515 VIDEO H.FREQ
H.FREQ SW Q1560
AFC CTRL Q1516
H.DRV.DUTY Q1554
Vcc BUFFER Q1517,1520
IC1501 Vcc BUFFER
Vcc BUFFER Q1502
REF 12V
Vcc SW Q1568
RV1501
IC1503(1/2)
FH DET
H.DRIVE BUFFER Q1558
FH SW Q1525,1528
FHA SW Q1530,1533 1534
FHB SW Q1538
FHC SW Q1552,1553
REF
VC
Vcc
V.BLK
V.PARA
PIN
V.DRIVE
V.RTN
V.NF
50H
PIN HASS
TOP PIN
H.PULSE
H.DRIVE
FH
FH A
FH B
FH C
PIN PHASE
V.RTN
+HC
-HC
IC502 PARABORA-OUT
BIAS Q508
CURRENT MIRROR Q502,503
PARABORA BUFFER Q509
V.PULSE SW Q511
DUMPER D513,515,519
24V
V.BLK Q520
C BLK Q519
C.BLK BUFFER Q527
12V
H.BLK Q522
BLK CLAMP D507,510
IC503(1/2) CONTROL
V.SIZE SW Q510,519
FH SW Q501
H.SW Q506
IC503(2/2) PIN CONTROL
FH PIN SW Q518
PIN OUT Q526
FH SW Q514
FHB SW Q515
H.DRIVE Q507
T501 HDT
H.OUT Q513
V.DRIVE Q521
V.OUT Q523,524
RV504 V.CENT
V.CENT Q516,517
RY501-504
RV501 H.CENT
H.CENT Q504,505

6-2. FRAME SCHEMATIC DIAGRAM



6-3. CIRCUIT BOARDS LOCATION



Note :

- All resistors are in ohms. 1/10W unless otherwise noted. kΩ: 1000Ω, MΩ: 100kΩ.
- All capacitors are in μF unless otherwise noted. pF: μμF. 50V or less are not indicated except for electrolytics and tantalums.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- : nonflammable resistor.
- : fuseble resistor.
- : panel designation and adjustment for repeair.
- △ : internal component.
  - * Adjustment resistor measurement impossibility (D2 BOARD R1670, R1729, R1751)
- Circled numbers refer to waveforms.
- All voltages are in V.
- Voltage are dc with respect to ground unless otherwise noted.
- Readings are taken with a 10 MΩ digital multimeter.
- Voltage variations may be noted due to normal production tolerance.
  - * Can not be measured.
  - V : B + line.
  - V : B − line.

No Mark : VIDEO IN
( ) : S-VIDEO
< >: DIGITAL

- : signal path.

- The components identified by ■ in this basic schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.
- When replacing components identified by ◪, make the necessary adjustments indicated. If results do not meet the specified value, change the component identified by ■ and repeat the adjustment until the specified value is achieved. (Refer to R1678, R1548 adjust on page 20)
- When replaceing the part in below table be sure to perform the related adjustment.

Part replaced (◪)	Adjustment (■)
IC501, IC503, IC505, Q1502, R1503, R1504, R1507, R1508 R1509, R1510, R1511, R1516, R1519, R1521, R1522, R1534, R1540, R1541, R1546, R1565 R1642, R1653, R1673, R1678 D2 BOARD	R1678 (+B (Vcc) MAX) D2 BOARD
R592, B595 ... D1 BOARD	
R907, R916, R919 ... (G BOARD32)	
IC1502, IC1504, D1510, R1616 R1622, R1625, R1626, R1631, R1548, R1548, R1552, R1553, R1554, R1564 ... D2 BOARD,	R1548 (HOLD-DOWN D2 BOARD)


Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RW	NONFLAMMABLE WIREWOUND
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGHRIPPLE

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par une trame et par une marque ⚠ sont d'une importance critique pour la sécurité. Ne les remplacer que par des pièces de numéro spécifié.

6-4. SCHEMATIC DIAGRAM



A BOARD

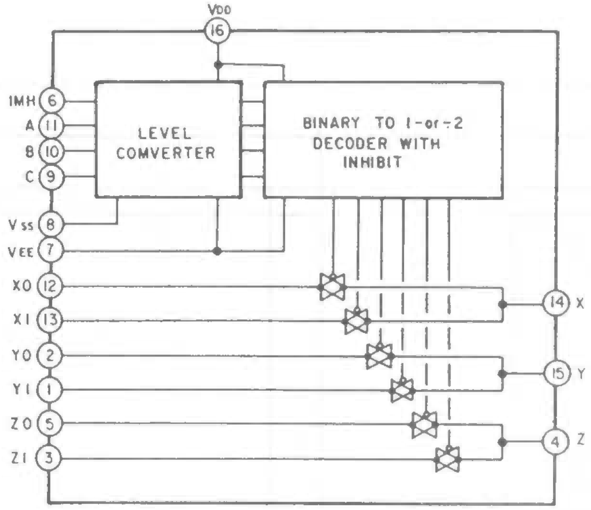
IC	
IC201	H-11
IC202	H-11
IC203	G-11
IC204	F-11
IC205	E-10
IC206	D-12
IC207	I-9
IC208	G-9
IC209	B-8
IC210	F-4
IC211	C-2
IC212	B-4
IC213	F-3
IC214	G-8
IC215	F-2
IC218	D-4
IC220	I-3

TRANSISTOR	
Q200	I-3
Q201	C-12
Q202	D-11
Q203	I-12
Q204	I-12
Q205	H-12
Q206	G-12
Q207	G-12
Q208	J-11
Q209	J-10
Q210	J-6
Q211	F-12
Q212	B-11
Q213	C-2
Q214	F-5
Q215	G-9
Q216	E-6
Q217	D-7
Q218	J-2
Q219	D-7
Q220	F-5
Q221	A-11
Q222	A-10
Q223	A-5
Q224	D-7
Q225	D-4
Q226	F-4
Q227	D-7
Q228	C-7
Q229	I-5
Q230	I-6
Q231	I-7
Q232	H-7
Q233	F-9
Q234	A-9
Q235	H-7
Q236	J-3
Q237	G-5
Q238	I-11
Q239	C-1
Q240	C-7
Q241	A-4
Q242	A-2
Q243	A-6
Q244	A-8
Q245	B-7
Q246	I-4
Q247	B-6
Q248	E-5
Q249	H-4
Q250	J-10
Q251	D-5
Q252	G-9
Q253	F-10
Q254	K-5
Q255	G-5
Q256	C-5
Q257	C-9
Q261	H-4
Q262	F-4
Q263	I-7
Q264	J-7
Q265	H-7
Q268	H-3
Q269	H-3
Q270	I-4
Q271	E-8
Q272	F-12
Q273	F-11
Q274	F-10
Q275	I-4
Q276	J-4

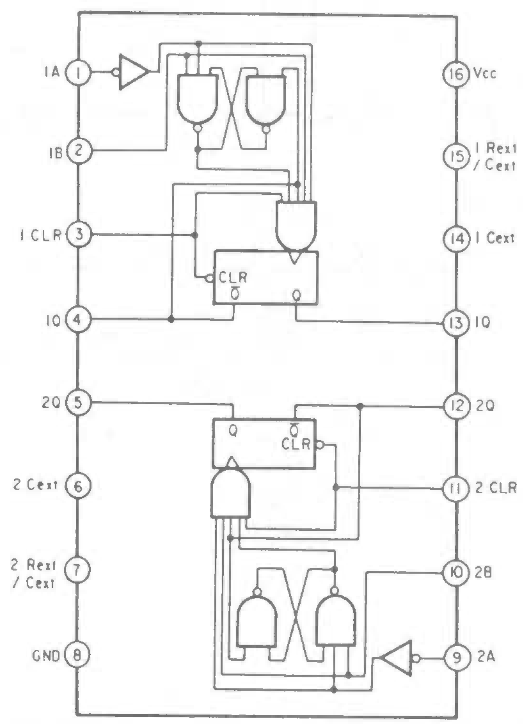
DIODE	
D200	H-2
D202	I-6
D203	I-6
D204	C-8
D205	I-6
D206	C-1
D207	F-7
D208	G-10
D209	E-2
D210	B-8
D211	H-4
D212	D-9
D213	B-1
D214	G-5
D215	C-8
D216	D-8
D217	A-4
D218	D-4
D219	B-2
D220	G-5
D221	F-10
D222	E-5
D223	G-6
D224	A-3
D298	D-12

VARIABLE RESISTOR	
RV201	A-3
RV202	G-3

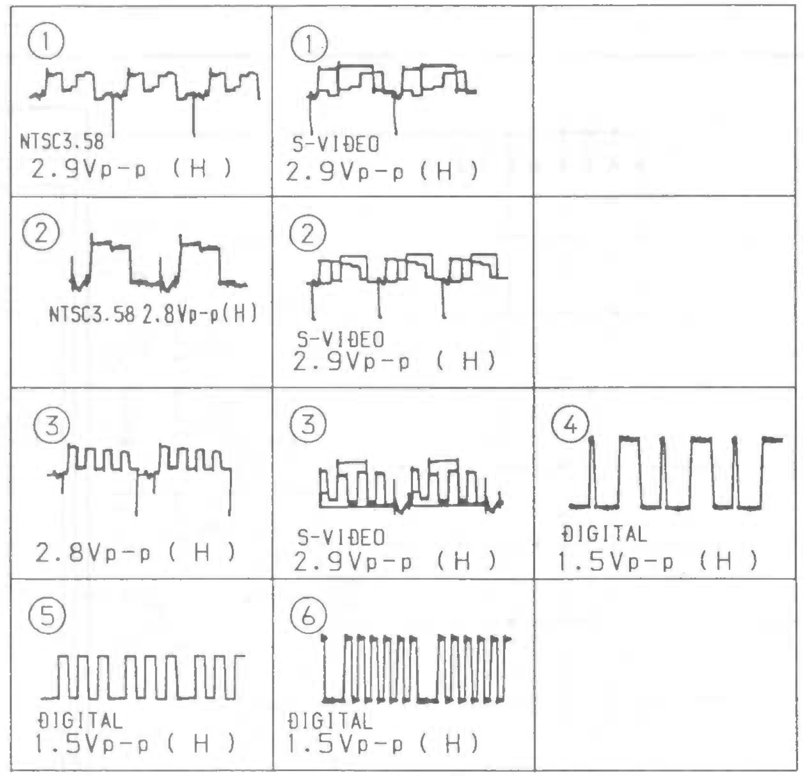
IC205,IC213
MC14053BCP



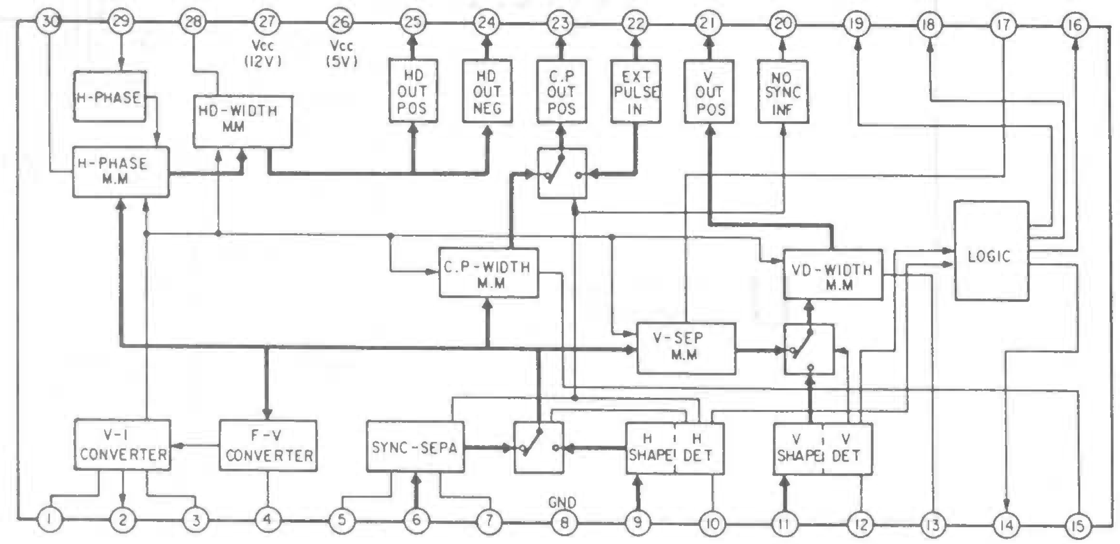
IC211,IC215
SN74LS221N

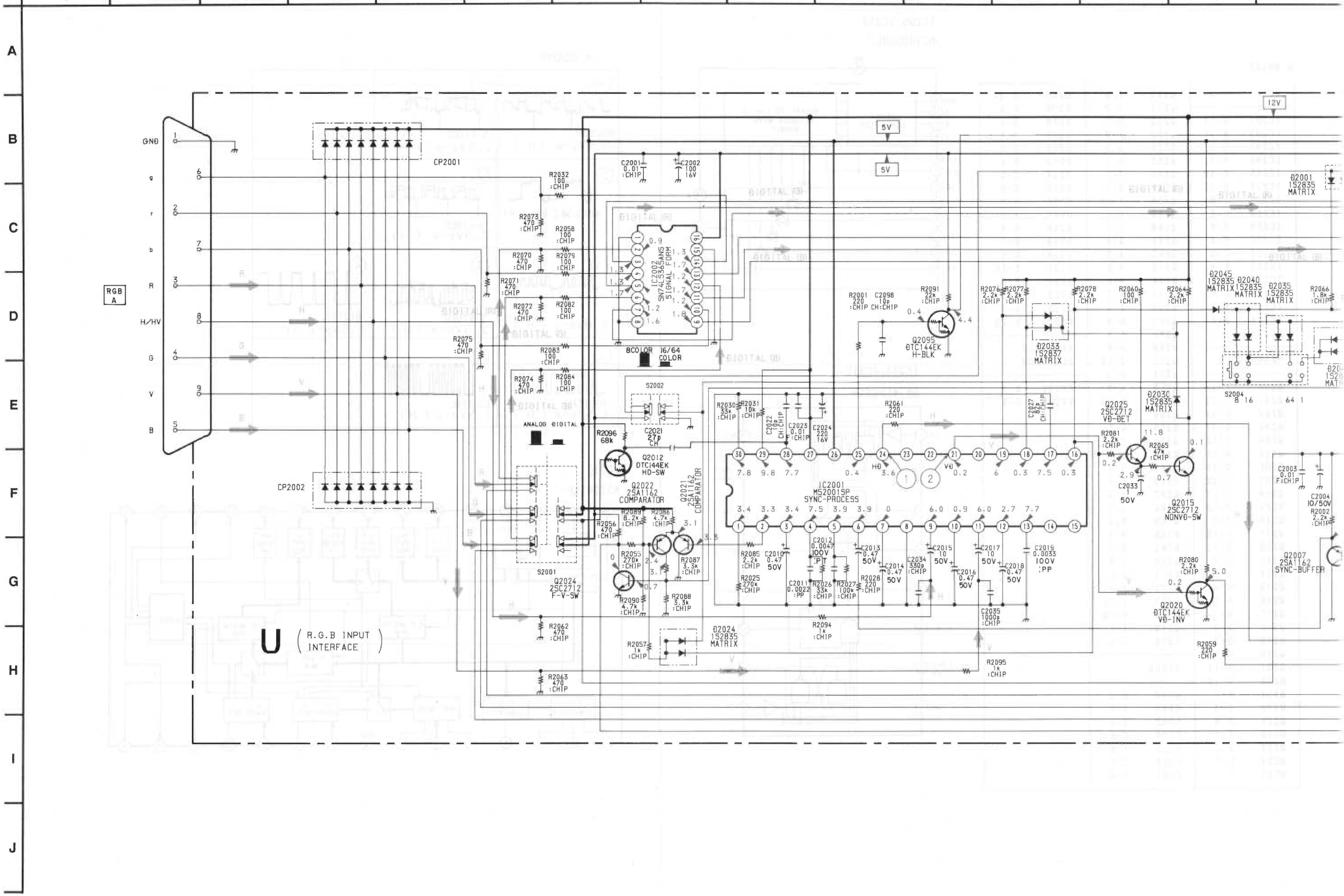


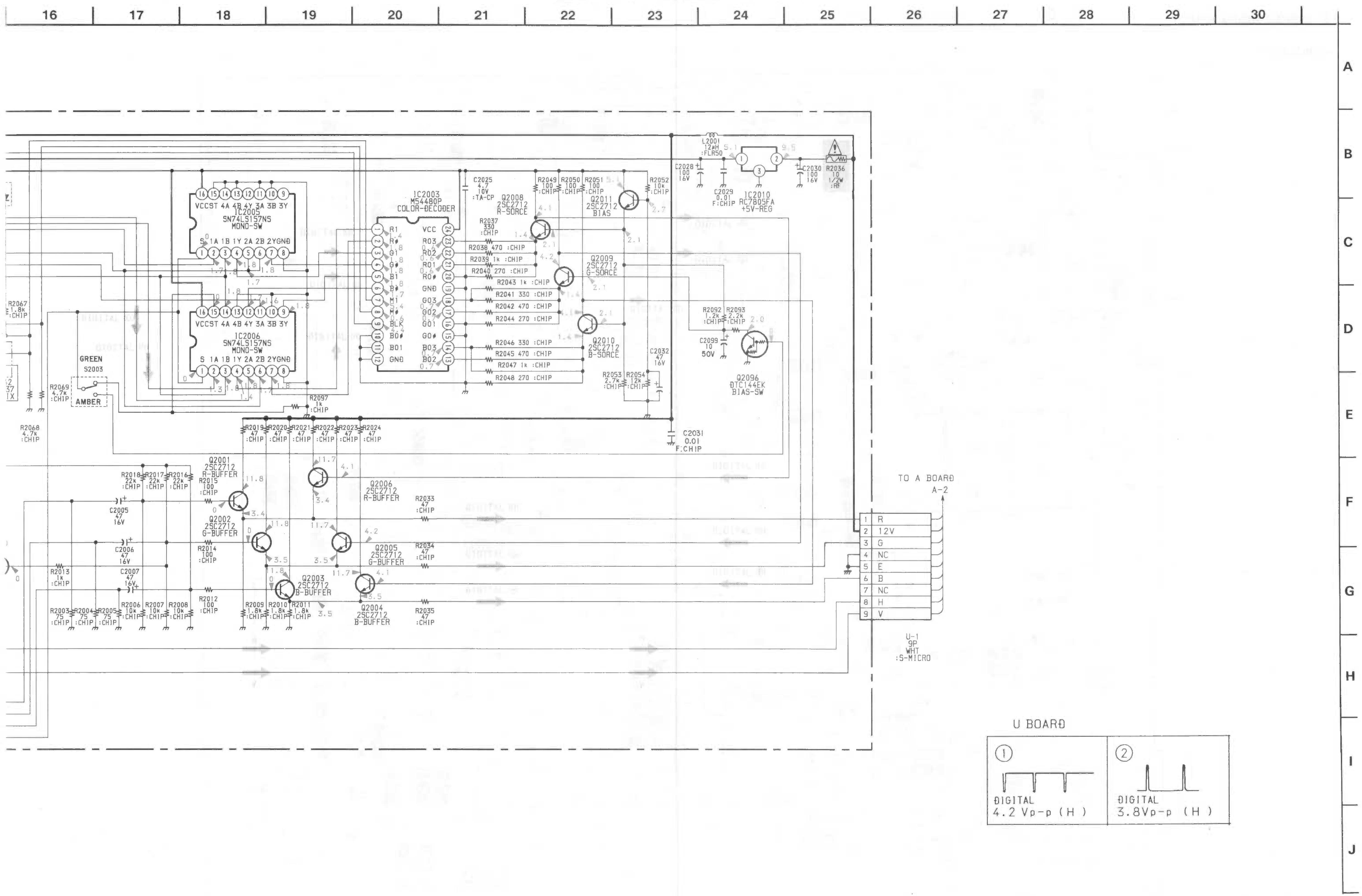
A BOARD



IC212
M52001SP



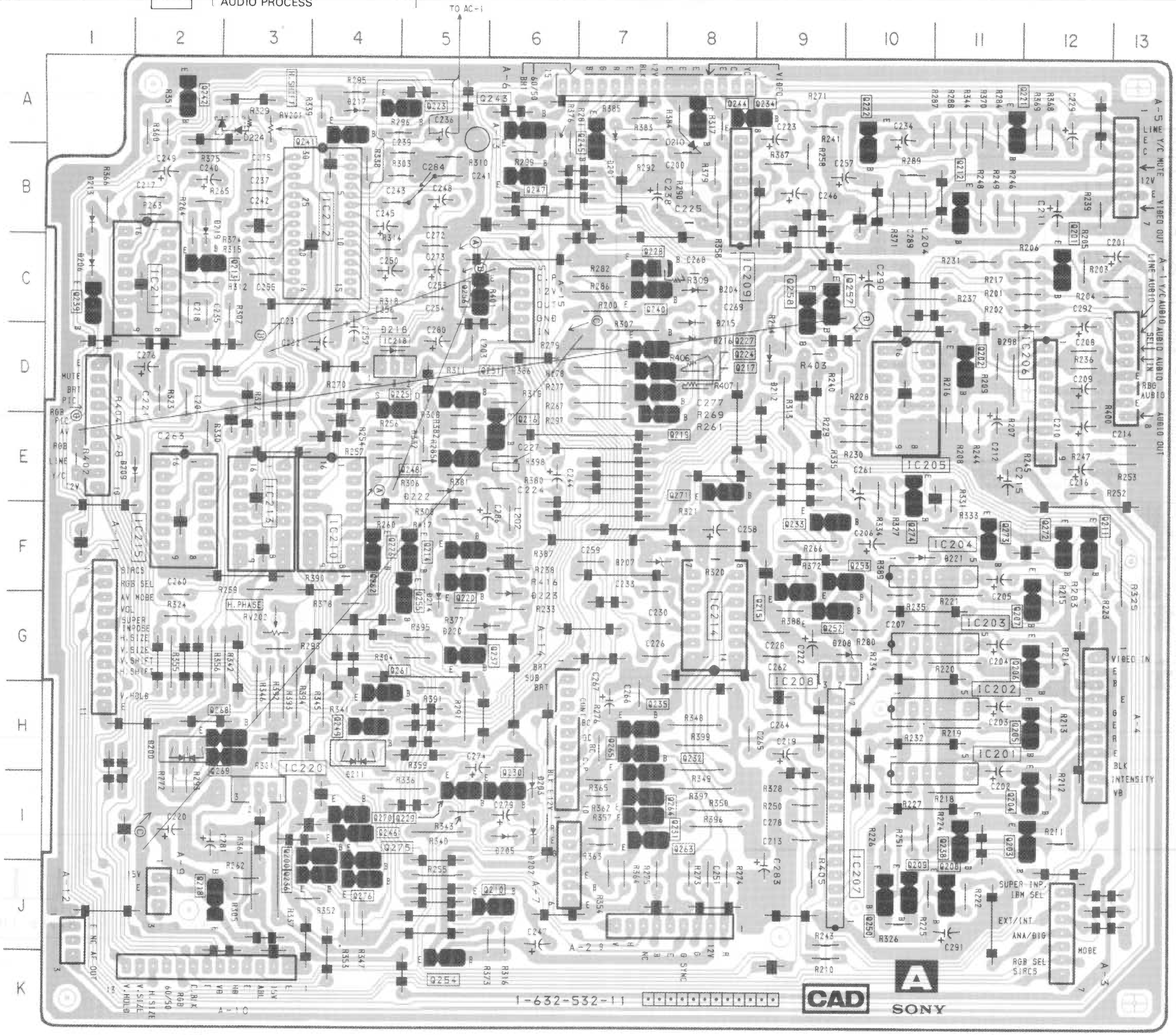

U (R.G.B INPUT INTERFACE)
RGB A
GND
g
r
b
R
H/HV
G
V
B
CP2001
CP2002
IC2002
SN74LS365ANS
SIGNAL FORM
8COLOR
16/64 COLOR
ANALOG
DIGITAL
S2001
S2002
Q2012
DTC144EK
HD-SW
Q2022
2SA1162
COMPARATOR
Q2021
2SA1162
COMPARATOR
Q2024
2SC2712
F-V-SW
IC2001
M52001SP
SYNC-PROCESS
Q2095
DTC144EK
H-BLK
D2033
1S2837
MATRIX
Q2025
2SC2712
VD-DET
D2030
1S2835
MATRIX
Q2015
2SC2712
NONVD-SW
Q2020
DTC144EK
VD-INV
Q2007
2SA1162
SYNC-BUFFER
D2045
1S2835
MATRIX
D2040
1S2835
MATRIX
D2035
1S2835
MATRIX
D2001
1S2835
MATRIX
D2024
1S2835
MATRIX
S2004
12V
5V
DIGITAL


IC2003
M54480P
COLOR-DECODER
IC2005
SN74LS157NS
MONO-SW
IC2006
SN74LS157NS
MONO-SW
IC2010 RC7805FA
+5V-REG
Q2001 2SC2712 R-BUFFER
Q2002 2SC2712 G-BUFFER
Q2003 2SC2712 B-BUFFER
Q2004 2SC2712 B-BUFFER
Q2005 2SC2712 G-BUFFER
Q2006 2SC2712 R-BUFFER
Q2008 2SC2712 R-SORCE
Q2009 2SC2712 G-SORCE
Q2010 2SC2712 B-SORCE
Q2011 2SC2712 BIAS
Q2096 DTC144EK BIAS-SW
GREEN
S2003
AMBER
TO A BOARD
A-2
1 R
2 12V
3 G
4 NC
5 E
6 B
7 NC
8 H
9 V
U-1
9P
WHT
:S-MICRO
U BOARD
①
DIGITAL
4.2 Vp-p (H)
②
DIGITAL
3.8Vp-p (H)

6-5. PRINTED WIRING BOARD

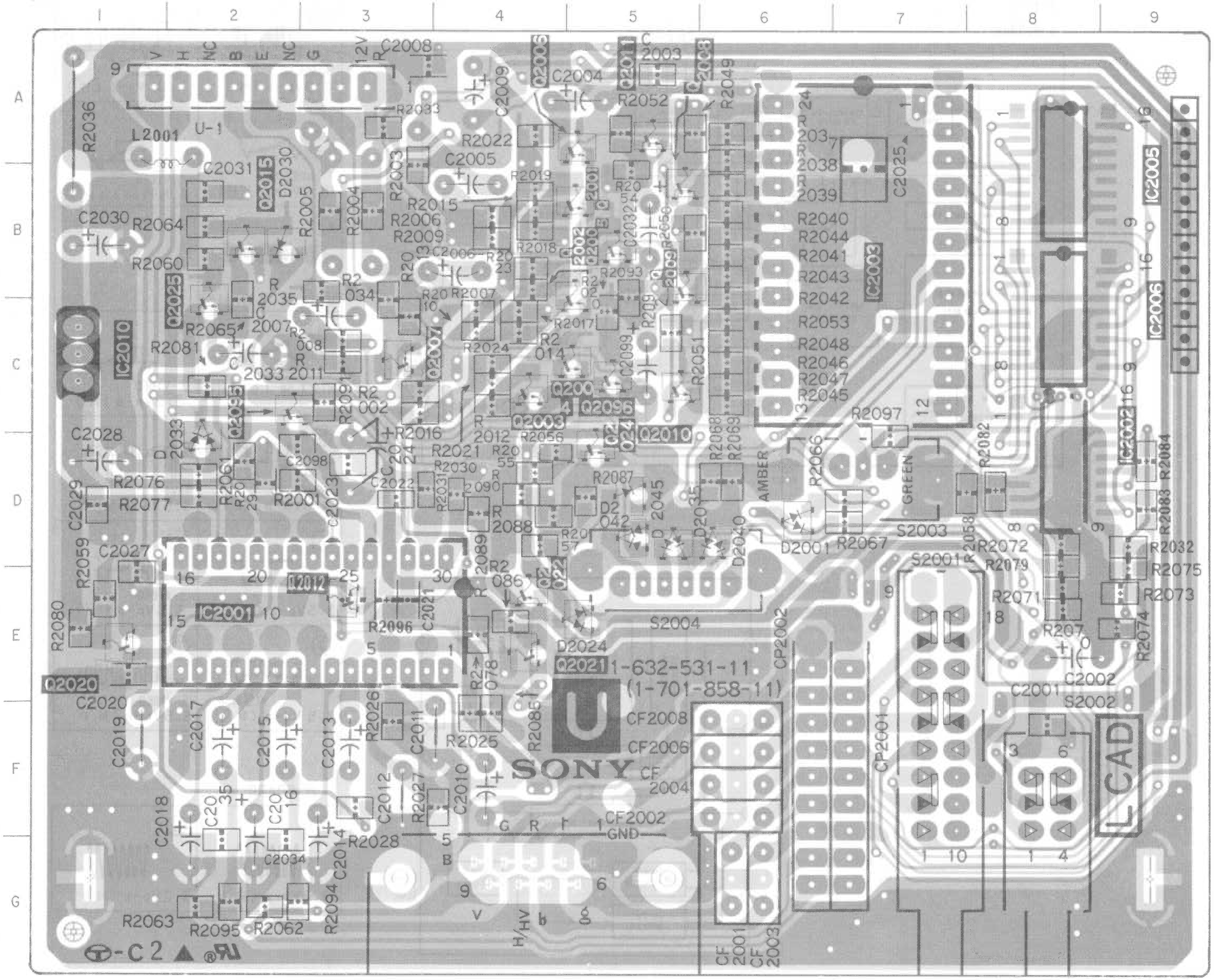
—A BOARD—

A VIDEO PROCESS, SYNC PROCESS, AUDIO PROCESS



U [R.G.B. INPUT INTERFACE]

—U BOARD—



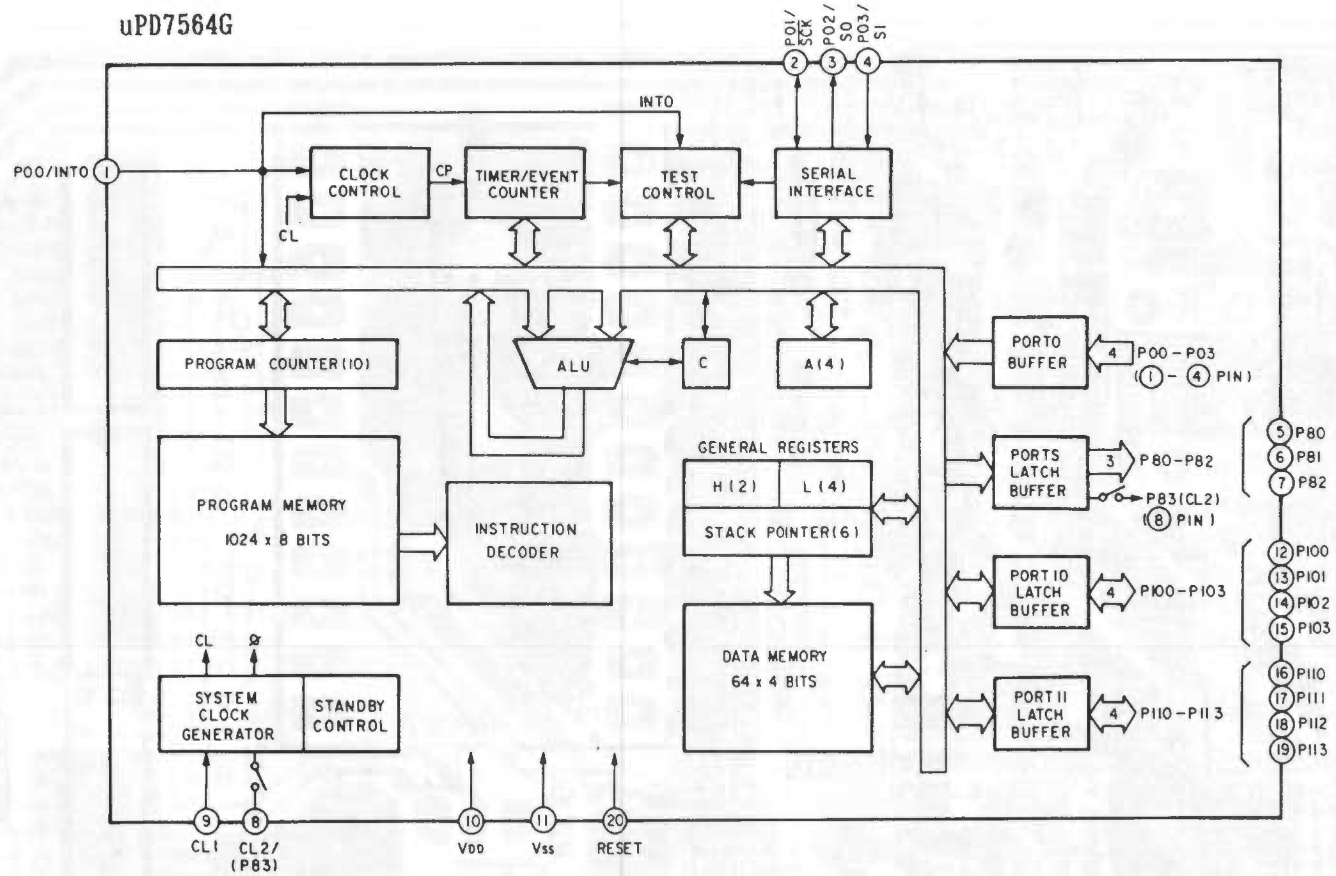
B BOARD

IC	
IC002	B-8
IC003	A-8
IC004	D-11
IC006	E-6
IC007	E-4
TRANSISTOR	
Q001	B-10
Q002	A-10
Q004	C-7
Q006	A-6
Q007	B-1
Q008	A-1
Q009	E-10
Q010	C-1
Q011	F-1
Q016	D-6
Q017	D-6
Q018	B-6
Q020	A-6
Q021	B-7
Q022	E-8
Q023	E-12
DIODE	
D002	B-7
D003	D-6
D004	A-9
D005	B-9
VARIABLE RESISTOR	
RV001	D-5

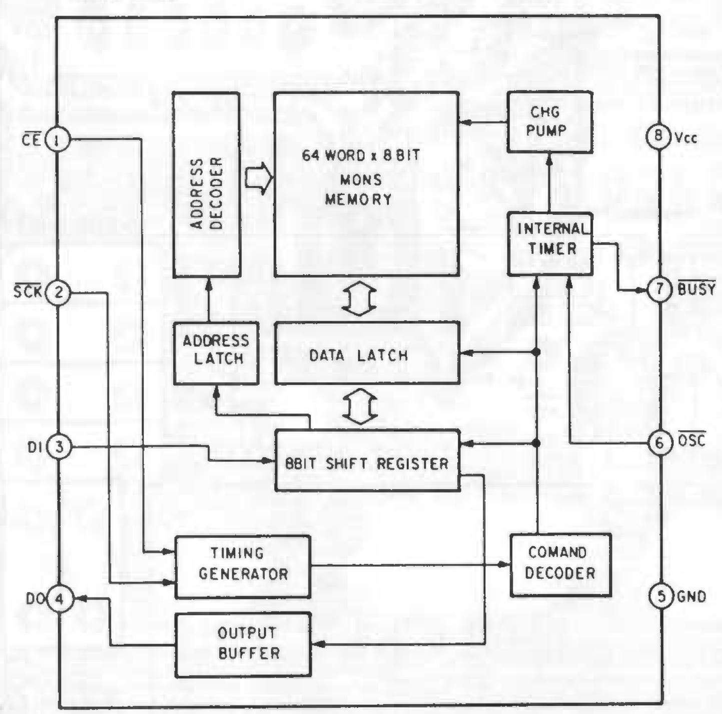
H BOARD

IC	
IC1001	F-3
IC1002	D-3
IC1003	I-3
IC1004	I-3
TRANSISTOR	
Q1001	J-2
Q1002	J-2
Q1003	L-3
Q1004	M-3
Q1005	M-3
Q1006	E-3
Q1007	K-4
Q1008	K-4
Q1013	N-3
Q1014	N-3
Q1015	E-3
Q1019	L-2
Q1021	N-3
Q1022	K-2
DIODE	
D1000	F-4
D1001	E-4
D1002	N-2
D1003	D-2
D1004	???
D1005	L-2
D1006	H-4
D1007	K-2

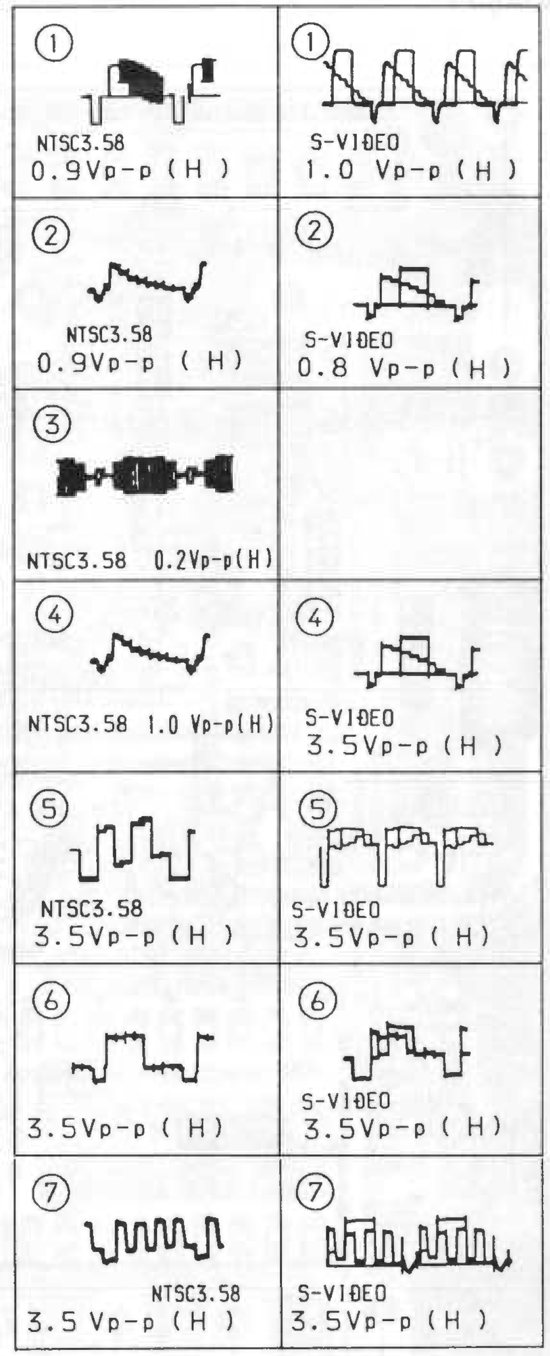
IC1001
uPD7564G



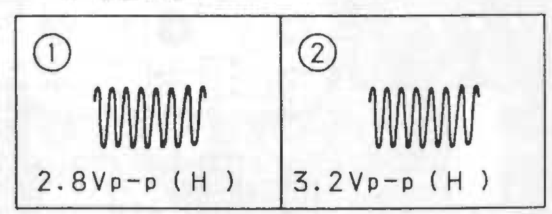
IC1002
CXK1011P



B BOARD



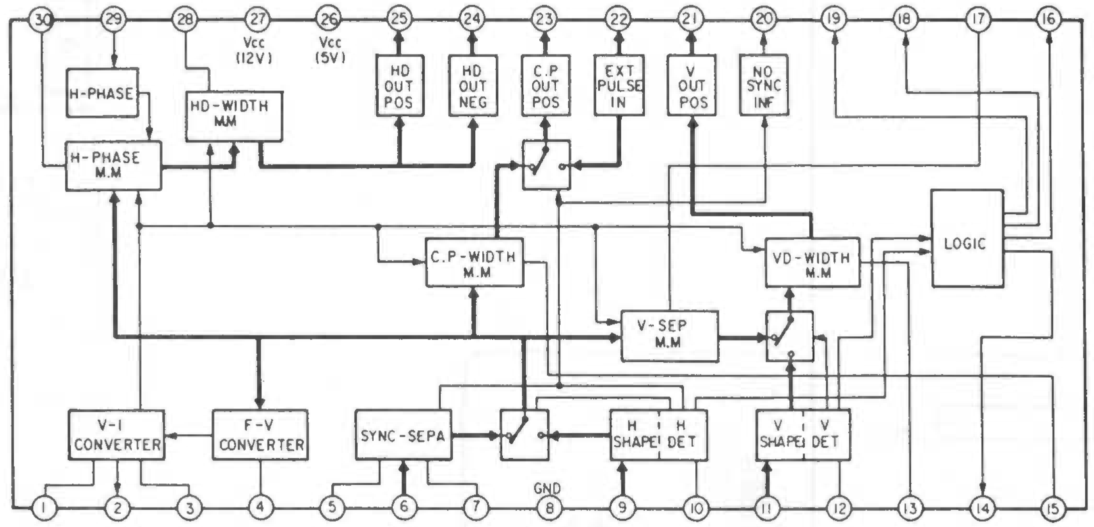
H BOARD



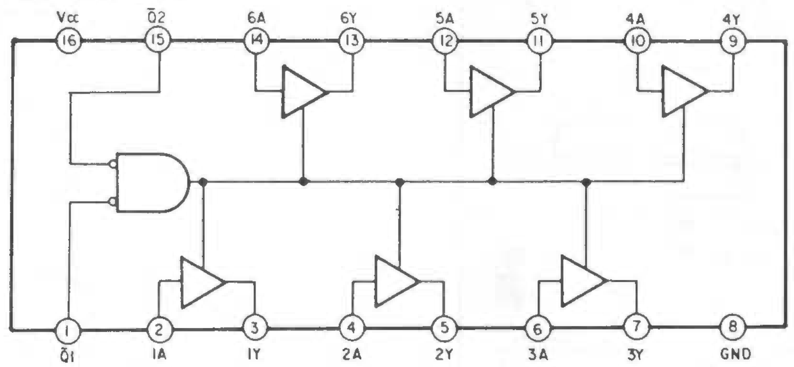
U BOARD

IC	
IC2001	E-2
IC2002	D-8
IC2003	B-7
IC2005	B-8
IC2006	C-8
IC2010	C-1
TRANSISTOR	
Q2001	B-5
Q2002	B-5
Q2003	C-4
Q2004	C-5
Q2005	B-5
Q2006	A-5
Q2007	C-3
Q2008	B-5
Q2009	B-5
Q2010	C-5
Q2011	A-5
Q2012	E-3
Q2015	B-2
Q2020	E-1
Q2021	E-4
Q2022	E-4
Q2024	D-5
Q2025	B-2
Q2095	C-2
Q2096	C-5
DIODE	
D2001	D-6
D2024	E-5
D2030	B-2
D2033	D-2
D2035	D-5
D2040	D-6
D2042	D-5
D2045	D-5

IC2001
M52001SP

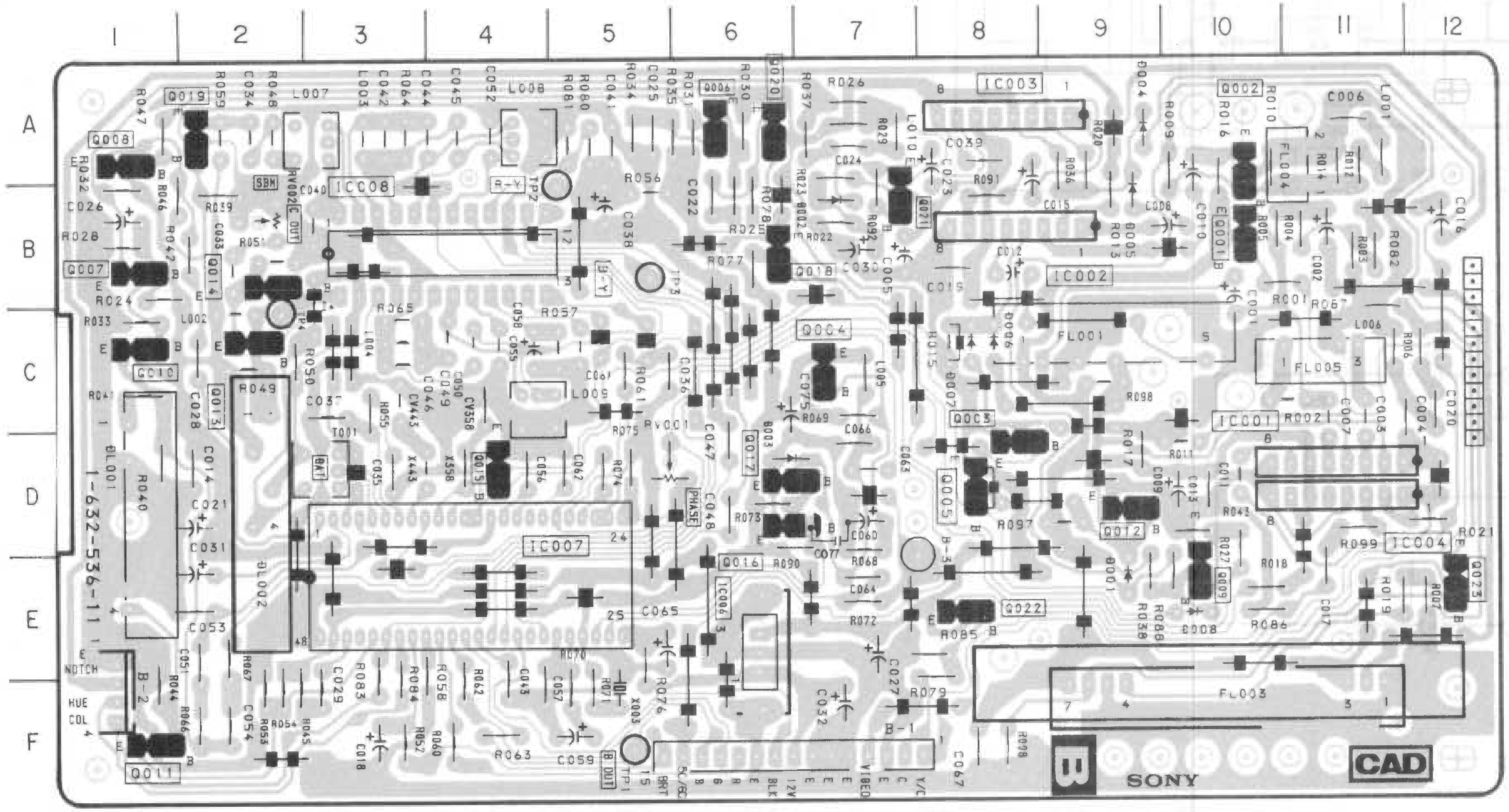


IC2002
SN74LS365ANS

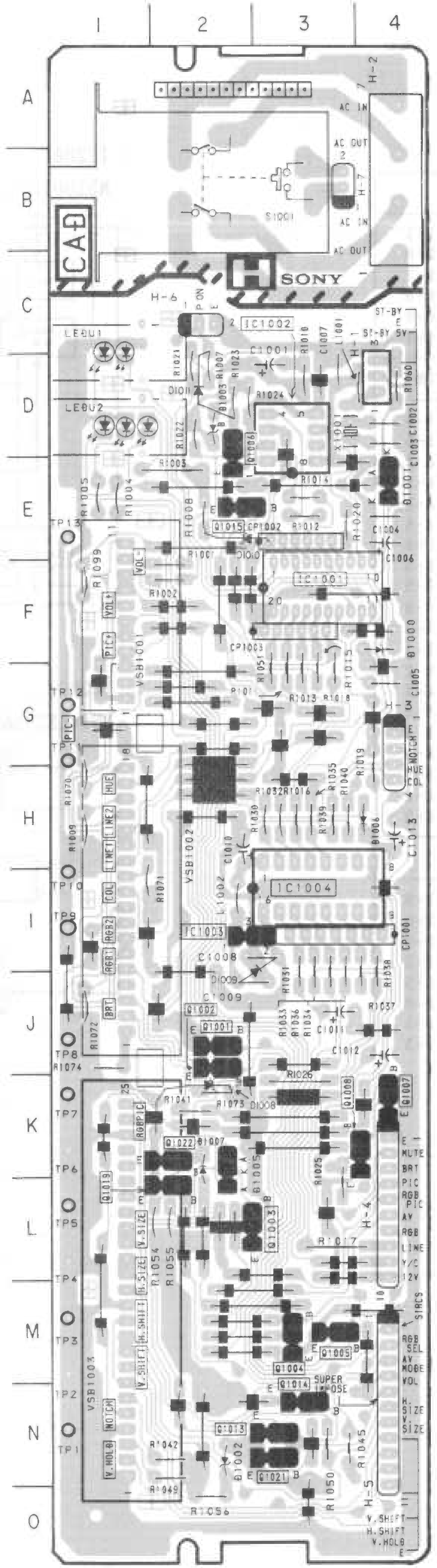



B [COLOR DECODER] **H** [USER CONTROL]


—B BOARD—



—H BOARD—

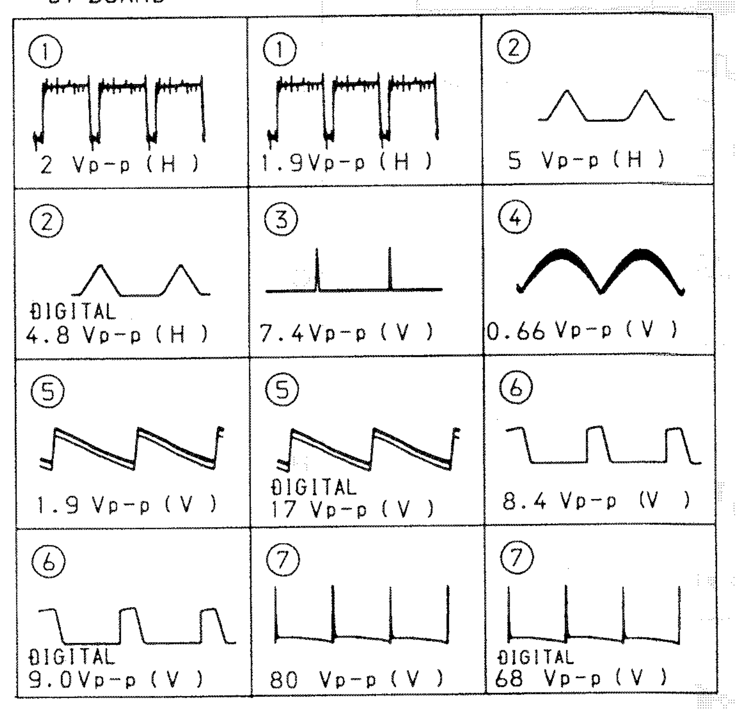



H (USER CONTROL)
B (COLOR DECODER)
IC002~IC004
NJM2234L
BUFFER
BIAS

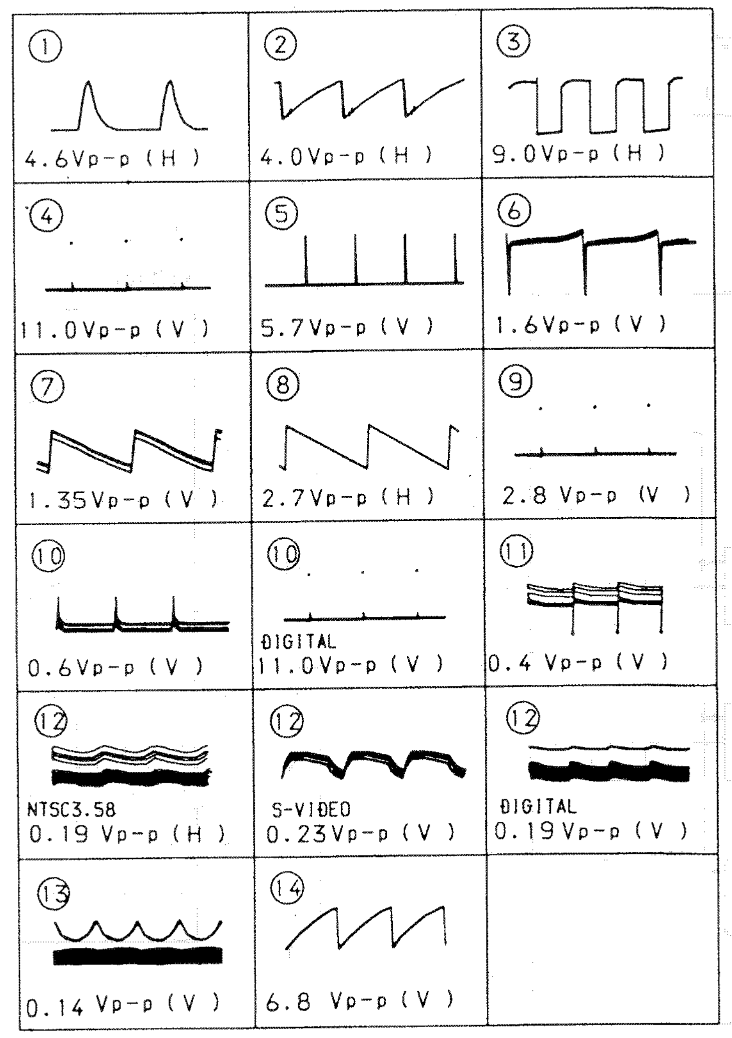

D2 (H/V OSC)
D1 (DEFLECTION H OUT, V OUT)
DY
HVR
D1/D2
TO A BOARD A-10
TO G BOARD G-10
TO C BOARD C-2
TO G BOARD G-11
FOR SERVICE
TO CRT

D1 [DEFLECTION H HOT, V OUT] **D2** [H/V OSC]

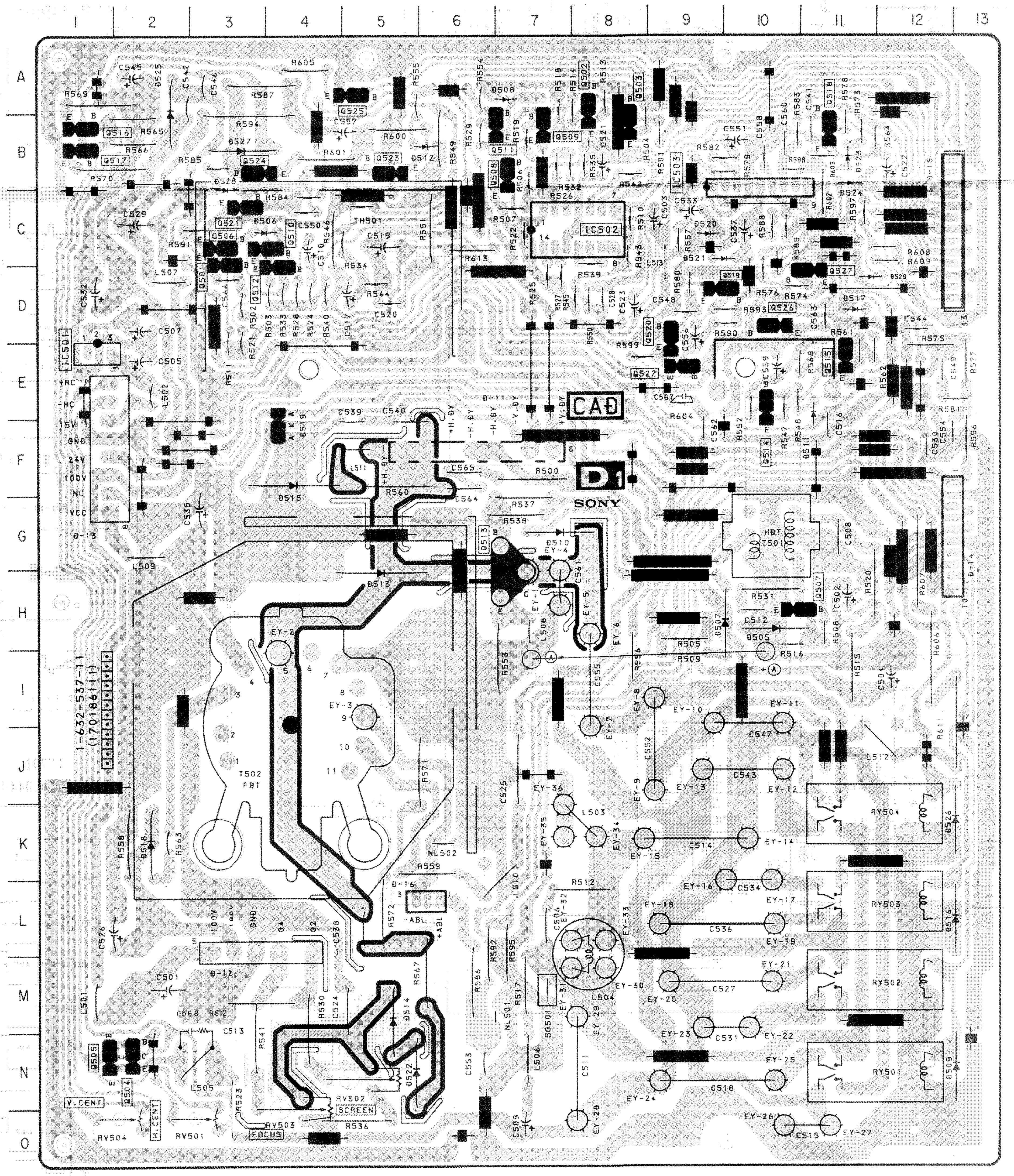
D1 BOARD



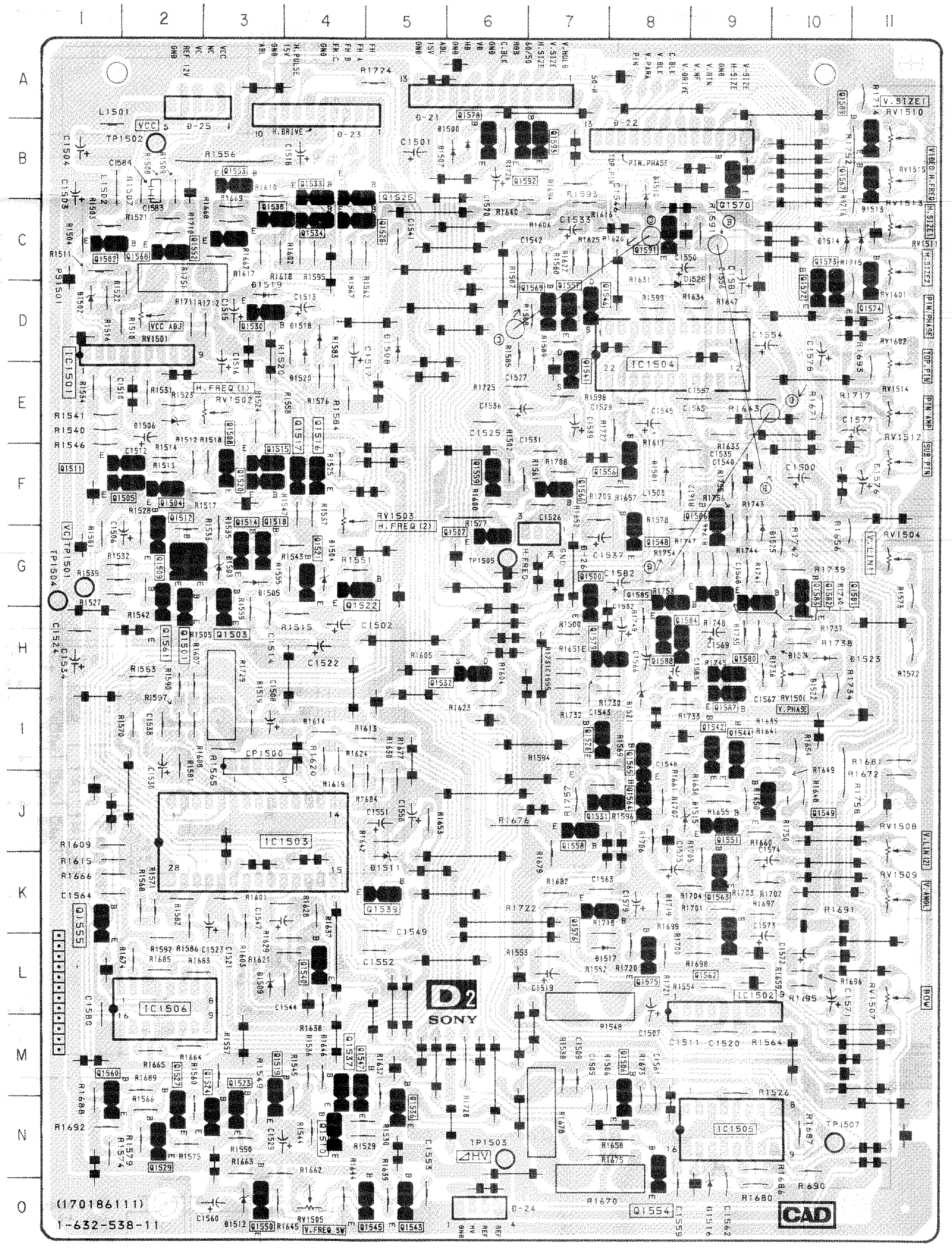
D2 BOARD



—D1 BOARD—



—D2 BOARD—



D1 BOARD

IC	
IC501	E-1
IC502	C-8
IC503	C-10

TRANSISTOR	
Q501	D-3
Q502	B-8
Q503	B-8
Q504	N-2
Q505	N-2
Q506	C-3
Q507	H-11
Q508	B-7
Q509	B-7
Q510	C-4
Q511	B-7
Q512	D-4
Q513	H-7
Q514	F-10
Q515	E-11
Q516	B-1
Q517	B-1
Q518	B-11
Q519	D-10
Q520	E-9
Q521	C-3
Q522	E-9
Q523	B-5
Q524	B-4
Q525	A-5
Q526	D-10
Q527	D-11

DIODE	
D505	H-10
D506	C-4
D507	H-10
D508	A-7
D509	N-13
D510	G-8
D511	F-11
D512	B-6
D513	H-5
D514	N-5
D515	G-4
D516	L-13
D517	D-11
D518	K-2
D519	F-4
D520	C-9
D521	D-10
D522	N-6
D523	B-11
D524	C-11
D525	B-2
D526	K-13
D527	B-3
D528	C-3
D529	D-12

VARIABLE RESISTOR	
RV501	O-3
RV502	N-5
RV503	O-4
RV504	O-2


D2 BOARD

IC	
IC1501	E-2
IC1502	M-9
IC1503	K-4
IC1504	E-8
IC1505	N-9
IC1506	M-2

TRANSISTOR	
Q1500	H-7
Q1501	H-2
Q1502	C-1
Q1503	H-3
Q1504	F-2
Q1505	F-2
Q1506	N-8
Q1507	G-6
Q1508	F-3
Q1509	G-2
Q1510	N-4
Q1511	F-2
Q1512	G-2
Q1514	G-3
Q1515	F-3
Q1516	F-4
Q1517	F-4
Q1518	G-3
Q1519	N-3
Q1520	F-3
Q1521	G-4
Q1522	G-4
Q1523	N-3
Q1524	N-3
Q1525	C-4
Q1526	I-7
Q1527	N-2
Q1528	C-5
Q1529	N-2
Q1530	D-3
Q1531	J-8
Q1532	H-6
Q1533	C-4
Q1534	C-4
Q1536	N-5
Q1537	N-4
Q1538	C-4
Q1539	K-5
Q1540	L-4
Q1541	E-7
Q1542	I-9
Q1543	O-5
Q1544	J-9
Q1545	O-5
Q1546	D-7
Q1547	N-5
Q1548	G-8
Q1549	J-10
Q1550	O-3
Q1551	J-9
Q1552	C-3
Q1553	B-3
Q1554	O-8
Q1555	L-1
Q1556	F-8
Q1557	D-7
Q1558	J-7
Q1559	F-6
Q1560	N-2
Q1561	H-2
Q1562	L-9
Q1563	K-9
Q1564	J-8
Q1565	J-8
Q1566	F-7
Q1567	B-11
Q1568	C-2
Q1569	D-7
Q1570	B-9
Q1572	D-10
Q1573	D-10
Q1574	D-11
Q1575	L-8
Q1576	K-8
Q1579	H-8
Q1580	H-9
Q1581	H-10
Q1582	H-10
Q1583	H-9
Q1584	H-9
Q1585	H-8
Q1586	G-9
Q1587	I-9
Q1588	H-8
Q1589	B-11
Q1591	C-8
Q1592	B-7
Q1593	B-7

DIODE	
D1501	F-8
D1502	D-1
D1503	G-3
D1504	G-4
D1505	G-3
D1506	E-2
D1507	B-6
D1508	E-5
D1509	L-3
D1510	C-8
D1511	K-5
D1512	O-3
D1513	C-11
D1514	C-10
D1515	J-9
D1516	O-9
D1517	L-8
D1518	D-4
D1519	D-3
D1520	E-4
D1521	I-8
D1522	I-10
D1523	H-10
D1524	H-10
D1525	G-10
D1526	C-2

VARIABLE RESISTOR	
RV1500	I-10
RV1501	D-2
RV1502	E-3
RV1503	G-4
RV1504	G-11
RV1505	O-4
RV1507	M-11
RV1508	K-11
RV1509	K-11
RV1510	B-11
RV1511	D-11
RV1512	F-11
RV1513	C-11
RV1514	E-11
RV1515	B-11
RV1601	D-11
RV1602	E-11

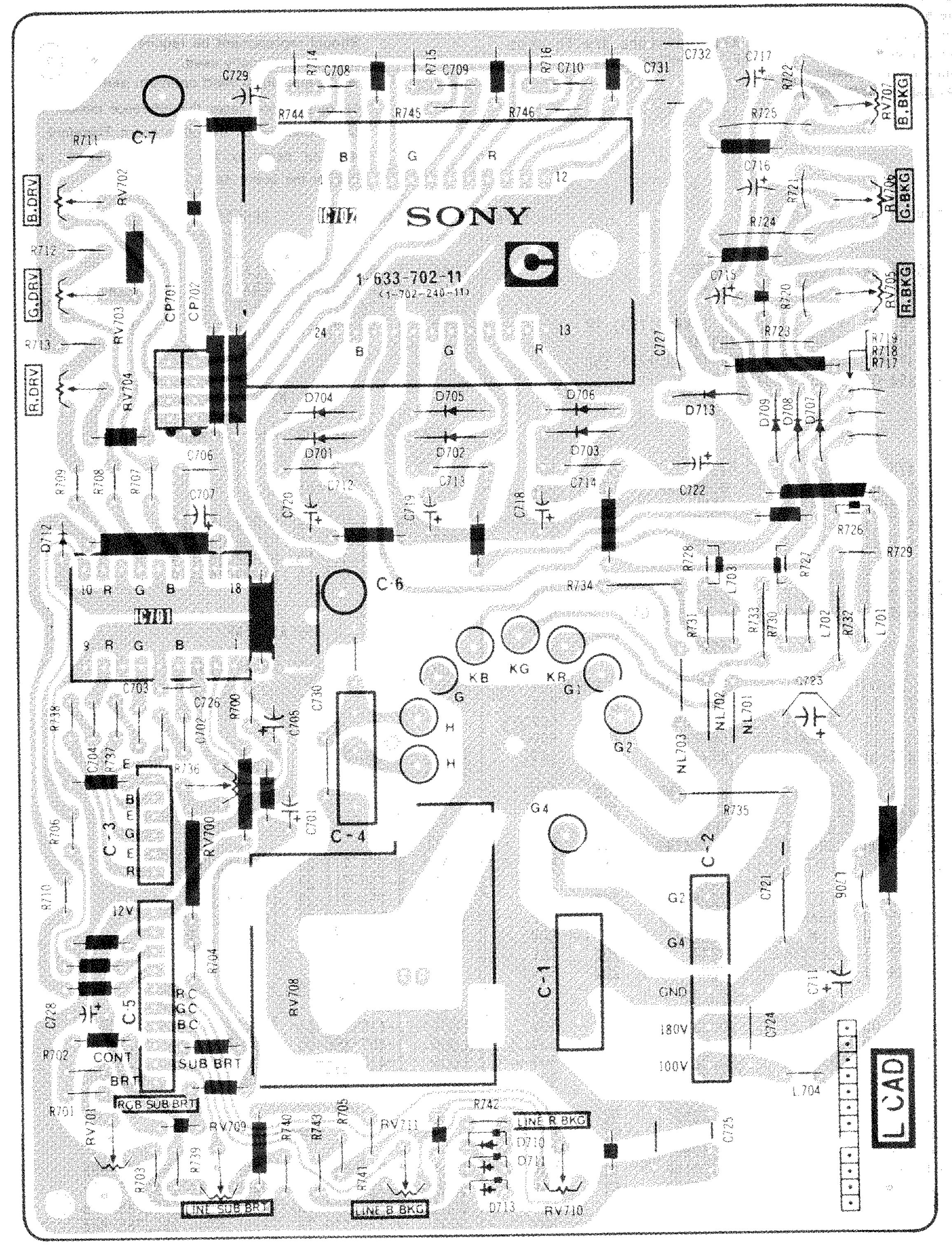


C BOARD
Q BOARD
IC701
CXA1044BP
POWER TRANSFORMER
PRIMARY
SECONDARY
G (POWER SUPPLY)
Q (INPUT/OUT PUT INTERFACE)
C (VIDEO AMP)
E (AUDIO OUT)
AC (ACTIVE FILTER)
AB (SYNC SIGNAL AMP)
SD-175
V901

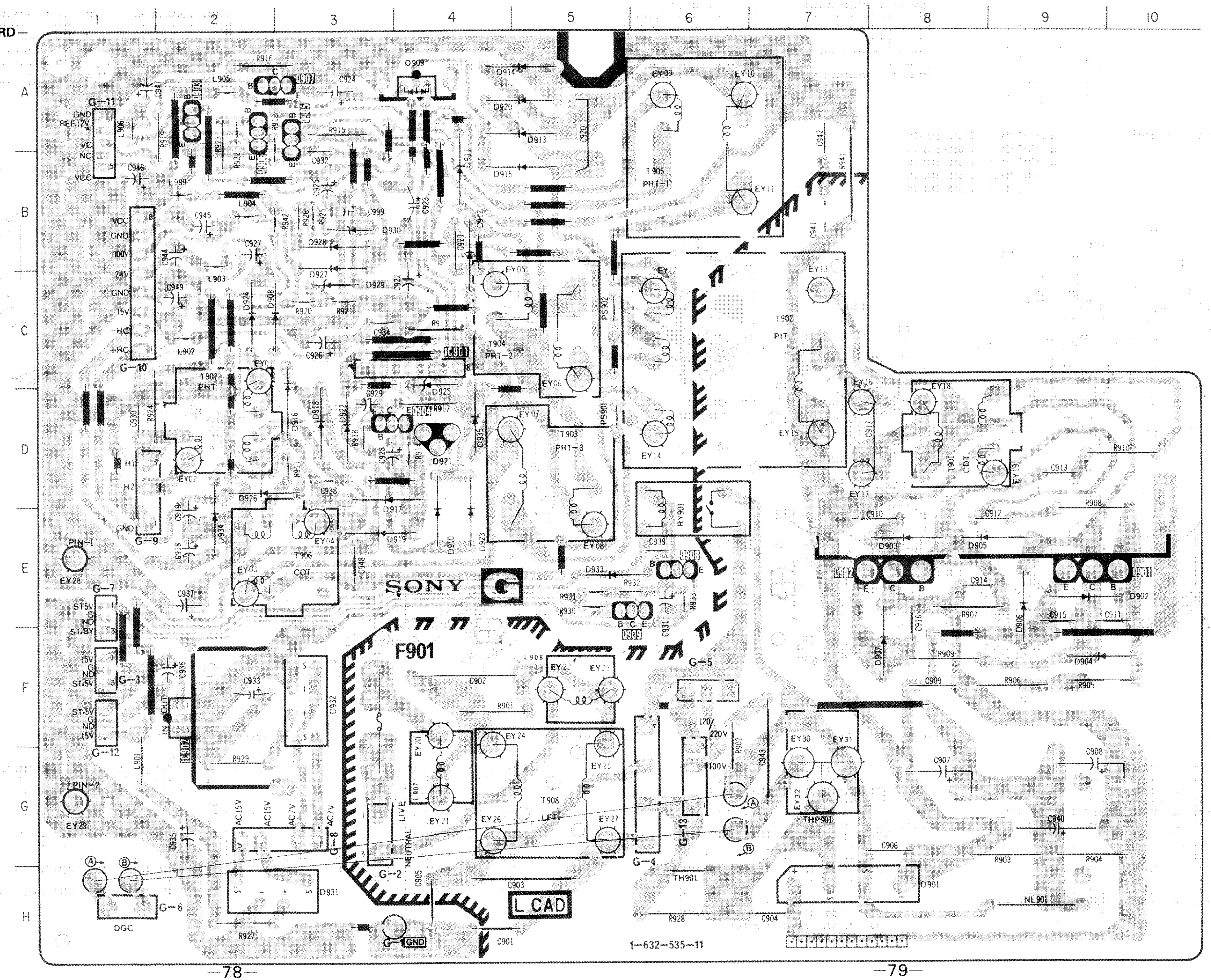
AB (SYNC SIGNAL AMP) **AC** (ACTIVE FILTER) **C** (VIDEO AMP) **E** (AUDIO OUT) **G** (POWER SUPPLY) **Q** (INPUT/OUTPUT INTERFACE)

GVM-1300 GVM-1300

—C BOARD—



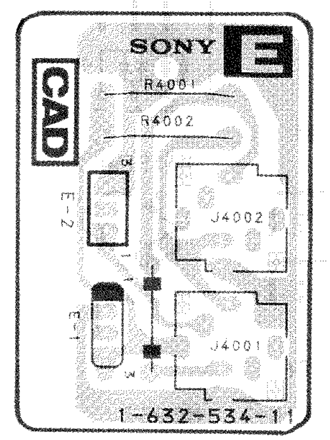
—G BOARD—



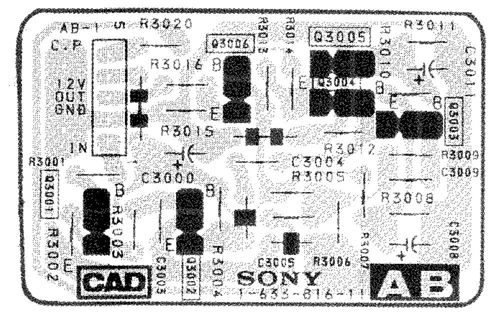
G BOARD

IC	
IC901	C-4
IC902	F-2
TRANSISTOR	
Q901	E-9
Q902	E-8
Q903	A-2
Q904	D-3
Q905	A-3
Q906	A-2
Q907	A-3
Q908	E-6
Q909	E-6
DIODE	
D901	H-7
D902	E-9
D903	E-8
D904	F-9
D905	E-8
D906	E-9
D907	F-9
D908	C-3
D909	A-4
D910	E-4
D911	B-4
D912	B-4
D913	A-5
D914	A-5
D915	B-5
D916	C-3
D917	D-3
D918	D-3
D919	E-3
D920	A-5
D921	D-4
D922	D-3
D923	E-4
D924	C-2
D925	C-4
D926	D-2
D927	B-3
D928	B-3
D929	C-3
D930	B-3
D931	H-2
D932	F-3
D933	E-5
D934	E-2
D935	D-4

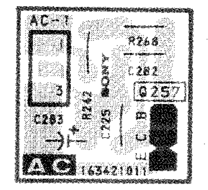
—E BOARD—



—AB BOARD—



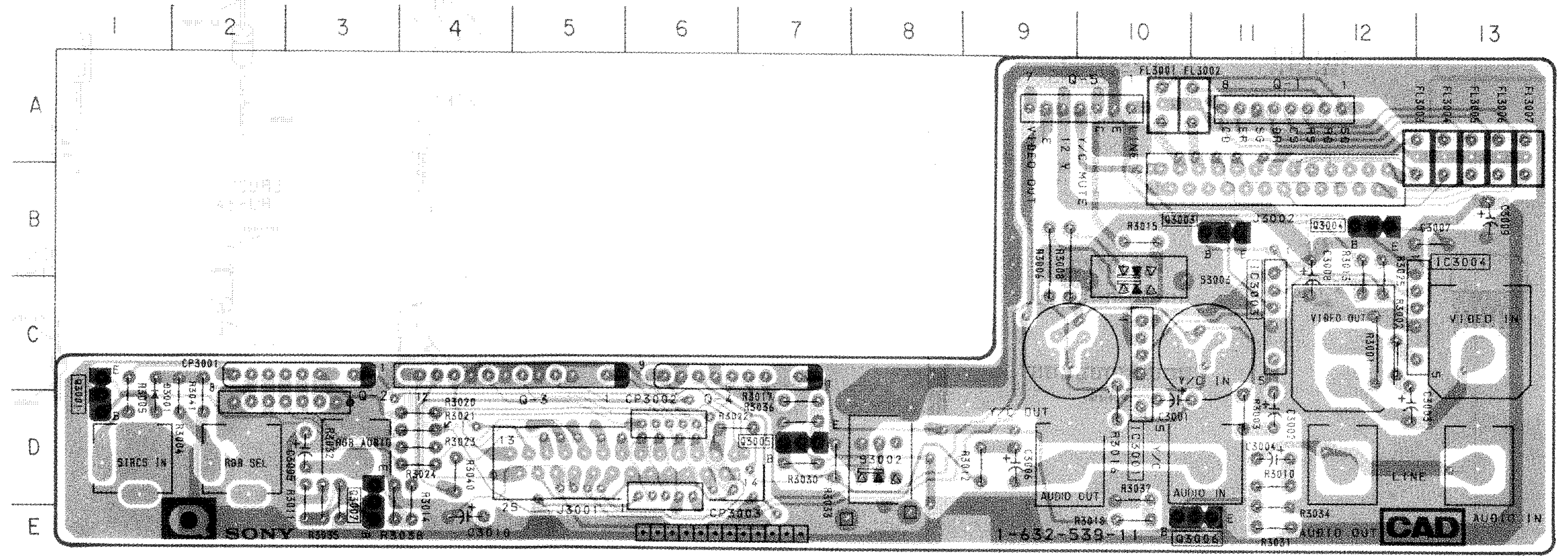
—AC BOARD—



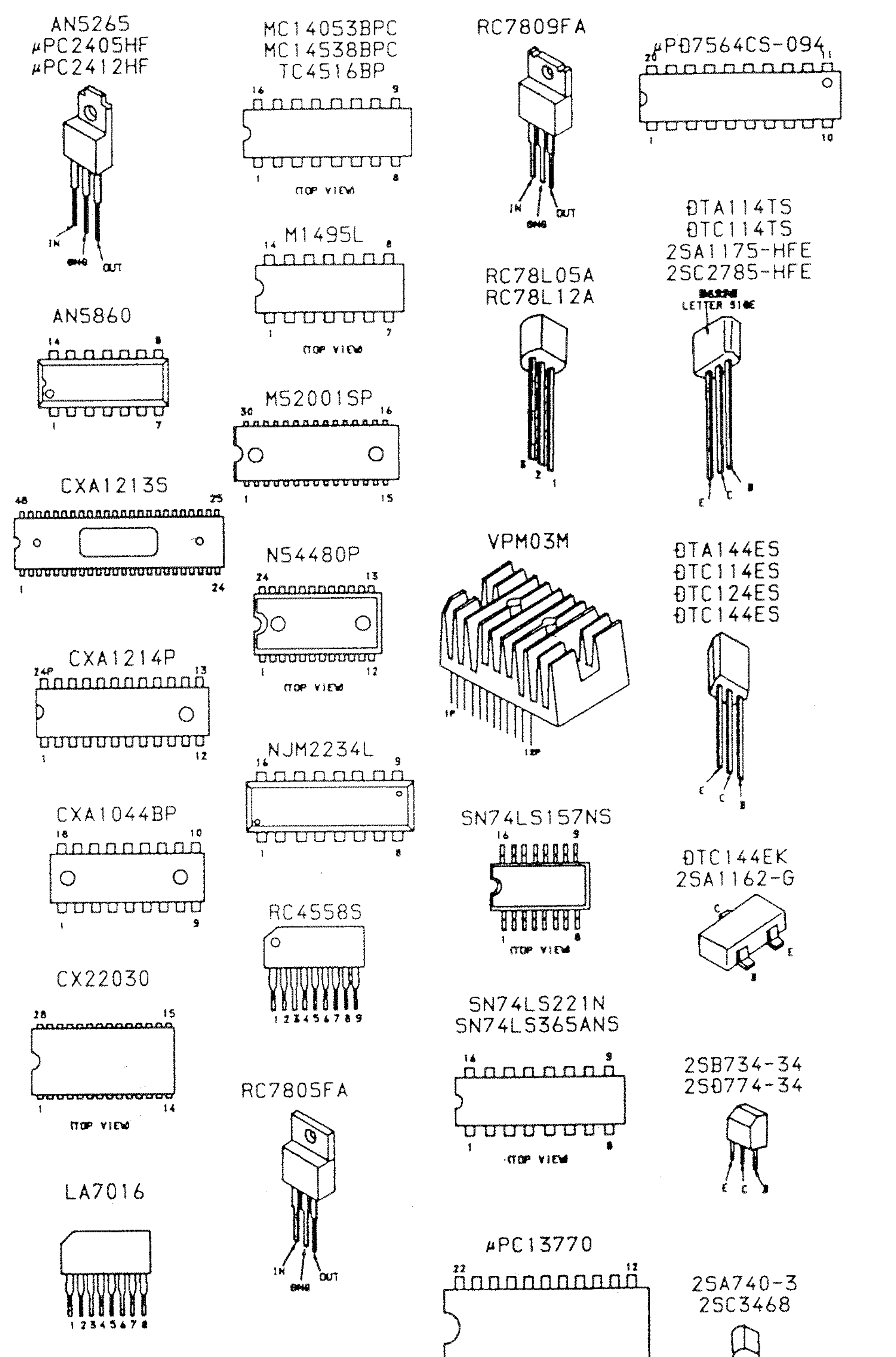
Q BOARD

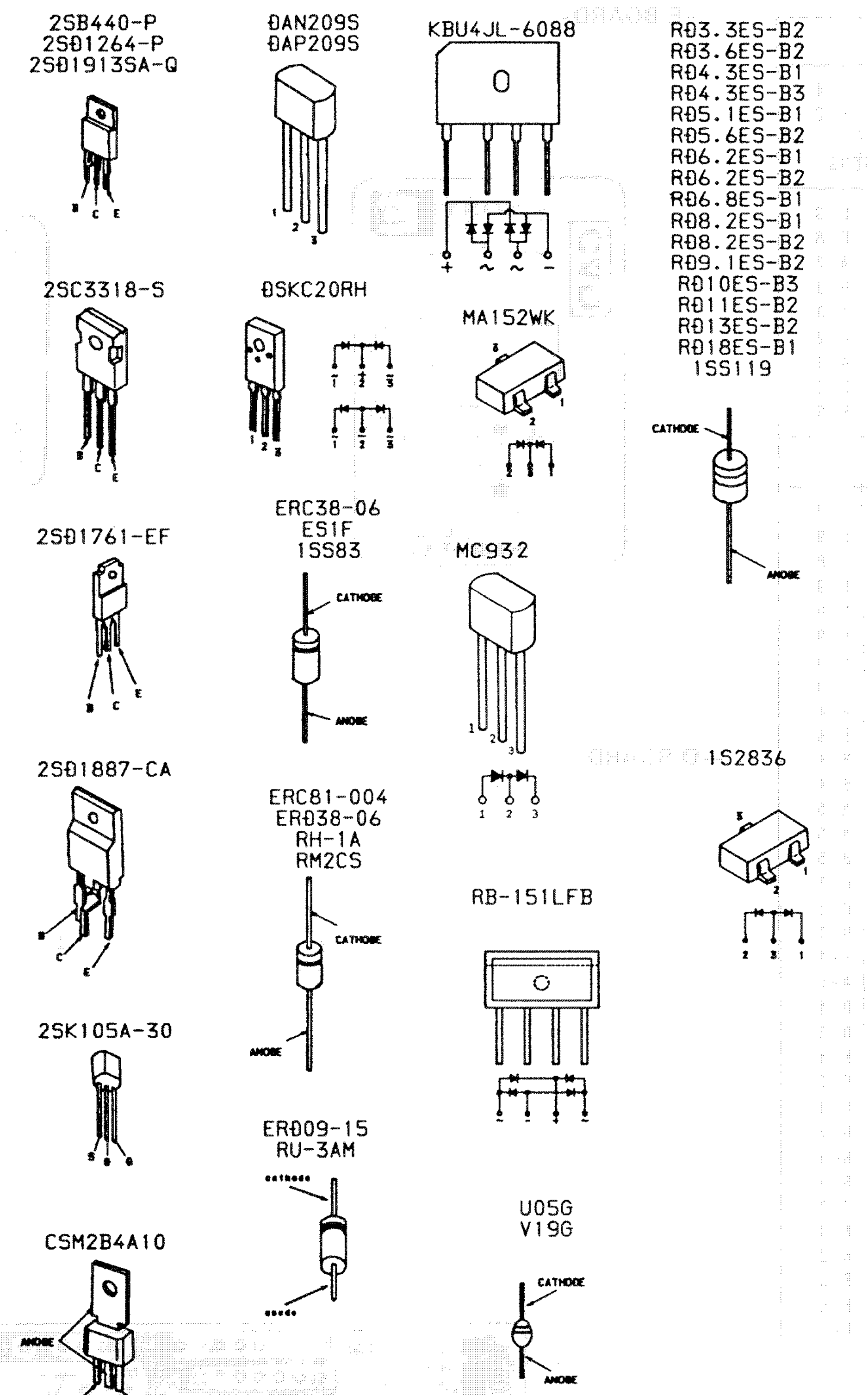
IC	
IC3001	C-10
IC3003	C-11
IC3004	C-13
TRANSISTOR	
Q3001	D-1
Q3003	B-11
Q3004	B-12
Q3005	D-7
Q3006	E-11
Q3007	E-3
DIODE	
D3001	D-1

—Q BOARD—



6-6. SEMICONDUCTORS





SECTION 7
EXPLODED VIEWS

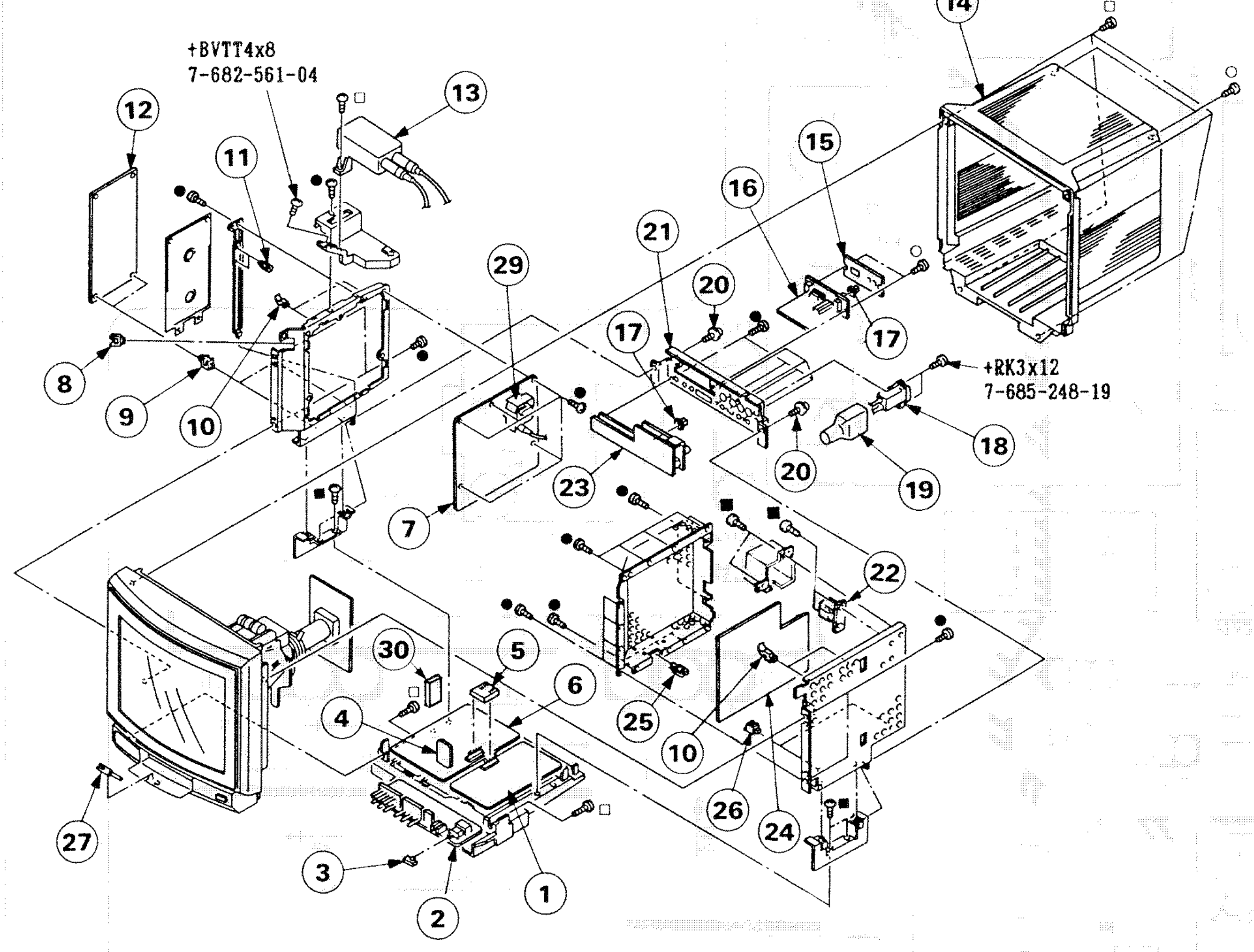
NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " ★ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

7-1. CHASSIS

● :+BVTP3x8 7-685-646-79
■ :+BVTP3x12 7-685-648-79
▲ :+BVTP3x16 7-685-650-79
○ :+BVTP4x10 7-685-660-79
□ :+BVTP4x16 7-685-663-79



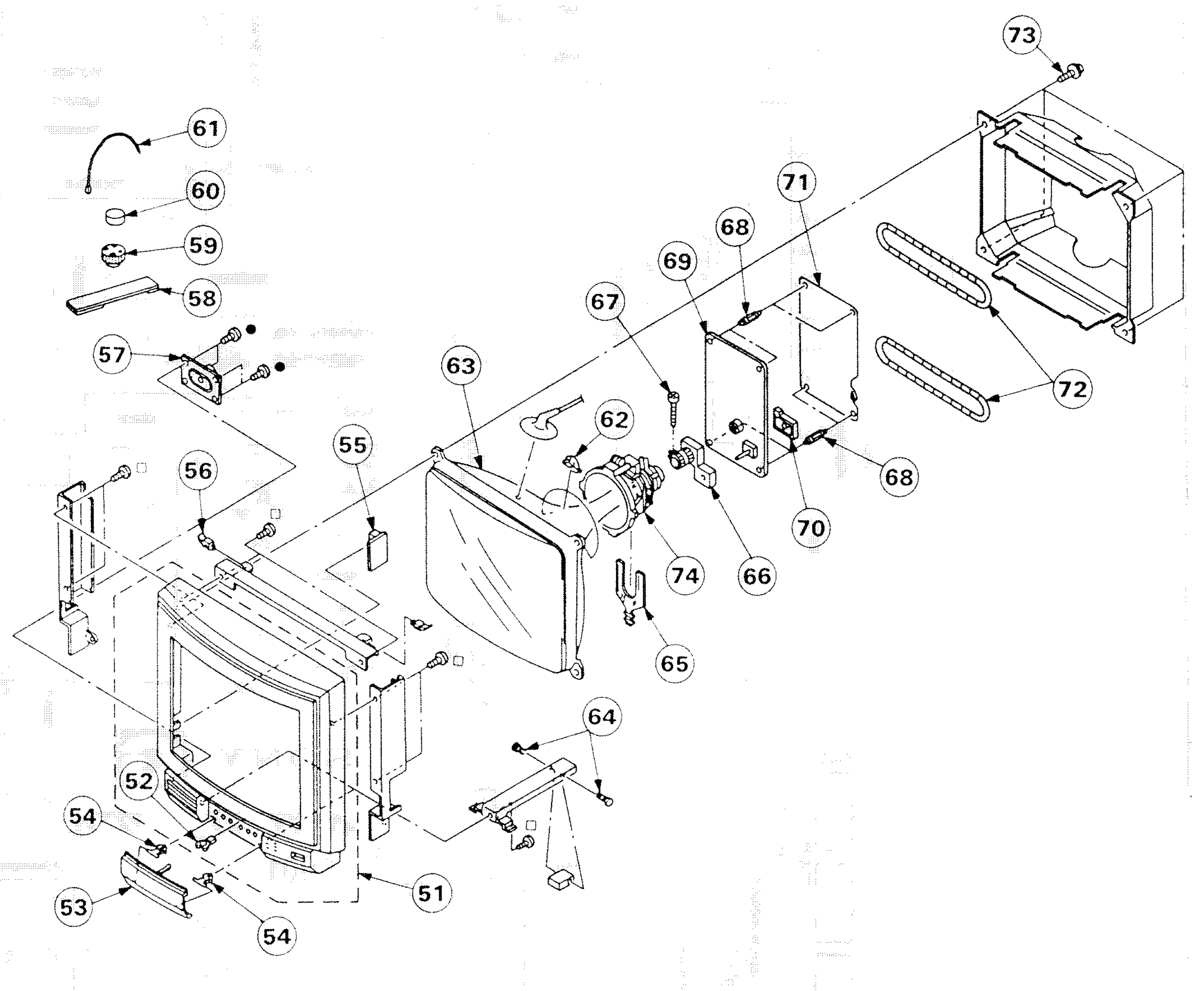
REF.NO.	PART NO.	DESCRIPTION	REMARK
1	*A-1135-618-A	B BOARD, COMPLETE	
2	*A-1371-602-A	H BOARD, COMPLETE	
3	4-397-106-01	BUTTON, POWER	
4	*1-633-816-11	AB BOARD	
5	⚠*1-568-507-11	CONNECTOR, BRIDGE 15P	
6	*A-1296-651-A	A BOARD, COMPLETE	2,4,28,30
7	*A-1345-900-A	D1 BOARD, COMPLETE	
8	4-308-119-00	HOLDER, WIRE	
9	*4-353-620-02	HINGE, PC BOARD	
10	*3-703-141-00	HOLDER, PCB	
11	*4-884-992-00	SUPPORT, PC	
12	*A-1345-921-A	D2 BOARD, COMPLETE	
13	⚠.1-230-666-41	RESISTOR ASSY, HIGH-VOLTAGE	
14	4-397-115-01	COVER, REAR	
15	1-537-207-21	TERMINAL BOARD	
16	A-1394-228-A	U BOARD, COMPLETE	
17	4-369-627-01	PUSH BUTTON	
18	⚠.1-526-945-11	INLET, AC 3P	
19	*4-601-466-00	COVER, 3P INLET	
20	4-382-854-01	SCREW (M3X8), P, SW (+)	
21	4-397-114-01	TERMINAL BOARD	
22	⚠.1-449-948-12	TRANSFORMER, POWER	
23	*1-632-539-11	Q BOARD	
24	*A-1316-099-A	G BOARD, COMPLETE	
25	⚠.4-343-123-02	RETAINER, AC CORD	
26	*3-701-903-00	HOLDER, PC BOARD	
27	3-695-308-01	SCREWDRIVER, CONTROL	
28	*1-634-210-11	AC BOARD	
29	⚠.1-439-390-11	TRANSFORMER ASSY, FLYBACK (NX-2100)	
30	*1-632-534-11	E BOARD	

7-2. PICTURE TUBE

●:+BVTP3x8 7-685-646-79
□:+BVTP4x16 7-685-663-79

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.



REF.NO.	PART NO.	DESCRIPTION	REMARK
51	X-4397-104-1	BEZEL ASSY	52
52	4-386-710-01	CATCHER, PUSH	
53	X-4397-103-1	DOOR ASSY	
54	3-703-035-11	SHAFT, DOOR	
55	*1-632-534-11	E BOARD	
56	*3-703-141-00	HOLDER, PCB	
57	1-544-252-11	SPEAKER	
58	X-4309-608-0	PERMALLOY ASSY, CONVERGENCE	
59	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM ϕ	
60	1-452-032-00	MAGNET, DISK; 10MM ϕ	
61	4-308-870-00	CLIP, LEAD WIRE	
62	3-703-961-01	SPACER, DY	
63	⚠.8-738-251-05	PICTURE TUBE (M34JNQ15X)	
64	4-812-134-00	RIVET NYLON, 3.5	
65	X-2105-403-3	REINFORCEMENT ASSY, H.TILT	
66	X-4392-701-1	HOLDER ASSY, B PC BOARD	67
67	*2-101-802-01	SCREW, FASTENING, SEPARATOR	
68	*3-682-419-01	HOLDER, P.C.B	
69	*A-1331-040-A	C BOARD, COMPLETE	
70	*4-392-704-01	COVER, H.STAT	
71	*4-397-123-01	PLATE, SHIELD, C	
72	⚠.1-426-442-21	COIL, DEMAGNETIZATION	
73	4-307-249-00	SCREW (5), TAPPING	
74	⚠.1-451-291-13	DEFLECTION YOKE (Y14FBC)	

SECTION 8
ELECTRICAL PARTS LIST

B

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS
- All resistors are in ohms
- F : nonflammable

When indicating parts by reference number, please include the board name.

CAPACITORS
- MF : µF, PF : µµF

COILS
- MMH : mH, UH : µH

- The components identified by ⧓ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.
- ※ : Selected to yield optimum performance.
- There are some cases the reference number on one board overlaps on the other board. Therefore, when ordering parts by the reference number, please include the board name.

REF.NO.	PART NO.	DESCRIPTION				REMARK
	*A-1135-618-A	B BOARD, COMPLETE				
		****************				
	*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P				
	*1-564-507-11	PLUG, CONNECTOR 4P				
	*1-568-371-11	PIN, CONNECTOR (PC BOARD) 15P				
	4-382-854-01	SCREW (M3X8), P, SW (+)				
		<CAPACITOR>				
C002	1-124-477-11	ELECT	47MF	20%	16V	
C004	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C006	1-164-023-11	CERAMIC	15PF	5%	50V	
C008	1-124-477-11	ELECT	47MF	20%	16V	
C009	1-124-477-11	ELECT	47MF	20%	16V	
C010	1-124-477-11	ELECT	47MF	20%	16V	
C013	1-164-097-11	CERAMIC	0.022MF		50V	
C014	1-164-097-11	CERAMIC	0.022MF		50V	
C015	1-124-477-11	ELECT	47MF	20%	16V	
C016	1-124-477-11	ELECT	47MF	20%	16V	
C017	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C018	1-124-791-11	ELECT	1MF	20%	50V	
C019	1-164-097-11	CERAMIC	0.022MF		50V	
C020	1-164-083-11	CERAMIC	680PF	10%	50V	
C021	1-124-477-11	ELECT	47MF	20%	16V	
C022	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C023	1-124-477-11	ELECT	47MF	20%	16V	
C024	1-164-064-11	CERAMIC	56PF	5%	50V	
C025	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C026	1-123-875-11	ELECT	10MF	20%	50V	
C027	1-124-120-11	ELECT	220MF	20%	16V	
C028	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C029	1-136-169-00	FILM	0.22MF	5%	50V	
C030	1-124-477-11	ELECT	47MF	20%	16V	
C031	1-126-233-11	ELECT	22MF	20%	50V	
C032	1-126-101-11	ELECT	100MF	20%	16V	
C035	1-136-169-00	FILM	0.22MF	5%	50V	
C037	1-130-475-00	MYLAR	0.0022MF	5%	50V	
C039	1-164-097-11	CERAMIC	0.022MF		50V	
C043	1-136-169-00	FILM	0.22MF	5%	50V	
C047	1-136-169-00	FILM	0.22MF	5%	50V	
C048	1-136-169-00	FILM	0.22MF	5%	50V	
C051	1-136-173-00	FILM	0.47MF	5%	50V	
C053	1-164-085-11	CERAMIC	0.001MF	10%	50V	
C054	1-130-491-00	MYLAR	0.047MF	5%	50V	
C056	1-136-166-00	FILM	0.12MF	5%	50V	
C057	1-130-487-00	MYLAR	0.022MF	5%	50V	
C059	1-124-927-11	ELECT	4.7MF	20%	50V	
C060	1-124-477-11	ELECT	47MF	20%	16V	
C062	1-136-165-00	FILM	0.1MF	5%	50V	
C064	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C065	1-126-101-11	ELECT	100MF	20%	16V	
C066	1-106-361-00	MYLAR	0.0056MF	10%	100V	
C067	1-164-097-11	CERAMIC	0.022MF		50V	
C075	1-124-477-11	ELECT	47MF	20%	16V	
C077	1-164-077-11	CERAMIC	220PF	10%	50V	
		<TRIMMER>				
CV358	1-141-245-00	CAP, TRIMMER				
		<DIODE>				
D002	8-719-911-19	DIODE 1SS119				
D003	8-719-911-19	DIODE 1SS119				
D004	8-719-911-19	DIODE 1SS119				
D005	8-719-911-19	DIODE 1SS119				
		<DELAY LINE>				
DL001	1-415-632-11	DELAY LINE, Y				
		<FILTER>				
FL003	1-466-162-11	BLOCK, COM FILTER (CFB-4)				
FL004	1-236-547-11	TRAP, LC				
		<IC>				
IC002	8-759-711-23	IC NJM2234L				
IC003	8-759-711-23	IC NJM2234L				
IC004	8-759-711-23	IC NJM2234L				
IC006	8-759-982-10	IC RC7809FA				
IC007	8-752-036-21	IC CXA1213S				
		<COIL>				
L001	1-410-521-11	INDUCTOR	100UH			
L005	1-407-496-00	INDUCTOR	2.2MMH			
L006	1-410-513-11	INDUCTOR	22UH			
L010	1-410-507-11	INDUCTOR	6.8UH			
		<TRANSISTOR>				
Q001	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q002	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q004	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q006	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q007	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q008	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q009	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q010	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q011	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q016	8-729-900-89	TRANSISTOR DTC144ES				

REF.NO.	PART NO.	DESCRIPTION				REMARK
Q017	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q018	8-729-900-89	TRANSISTOR DTC144ES				
Q020	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q021	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q022	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q023	8-729-119-78	TRANSISTOR 2SC2785-HFE				
		<RESISTOR>				
R001	1-249-405-11	CARBON	100	5%	1/4W	
R003	1-249-417-11	CARBON	1K	5%	1/4W	
R004	1-249-399-11	CARBON	33	5%	1/4W	
R005	1-249-405-11	CARBON	100	5%	1/4W	
R006	1-249-409-11	CARBON	220	5%	1/4W	
R007	1-249-421-11	CARBON	2.2K	5%	1/4W	
R008	1-249-421-11	CARBON	2.2K	5%	1/4W	
R009	1-249-415-11	CARBON	680	5%	1/4W	
R010	1-249-434-11	CARBON	27K	5%	1/4W	
R012	1-249-415-11	CARBON	680	5%	1/4W	
R013	1-249-431-11	CARBON	15K	5%	1/4W	
R014	1-249-434-11	CARBON	27K	5%	1/4W	
R016	1-249-419-11	CARBON	1.5K	5%	1/4W	
R018	1-249-405-11	CARBON	100	5%	1/4W	
R019	1-249-417-11	CARBON	1K	5%	1/4W	
R020	1-249-431-11	CARBON	15K	5%	1/4W	
R021	1-249-431-11	CARBON	15K	5%	1/4W	
R022	1-249-435-11	CARBON	33K	5%	1/4W	
R023	1-249-427-11	CARBON	6.8K	5%	1/4W	
R024	1-249-430-11	CARBON	12K	5%	1/4W	
R025	1-249-411-11	CARBON	330	5%	1/4W	
R026	1-249-411-11	CARBON	330	5%	1/4W	
R027	1-249-433-11	CARBON	22K	5%	1/4W	
R028	1-249-435-11	CARBON	33K	5%	1/4W	
R029	1-249-419-11	CARBON	1.5K	5%	1/4W	
R030	1-249-411-11	CARBON	330	5%	1/4W	
R031	1-249-415-11	CARBON	680	5%	1/4W	
R032	1-249-411-11	CARBON	330	5%	1/4W	
R033	1-249-417-11	CARBON	1K	5%	1/4W	
R034	1-249-421-11	CARBON	2.2K	5%	1/4W	
R035	1-249-429-11	CARBON	10K	5%	1/4W	
R036	1-249-441-11	CARBON	100K	5%	1/4W	
R037	1-249-411-11	CARBON	330	5%	1/4W	
R038	1-249-417-11	CARBON	1K	5%	1/4W	
R039	1-249-417-11	CARBON	1K	5%	1/4W	
R040	1-249-416-11	CARBON	820	5%	1/4W	
R041	1-249-415-11	CARBON	680	5%	1/4W	
R042	1-249-405-11	CARBON	100	5%	1/4W	
R043	1-249-435-11	CARBON	33K	5%	1/4W	
R044	1-249-415-11	CARBON	680	5%	1/4W	
R045	1-249-419-11	CARBON	1.5K	5%	1/4W	
R046	1-249-409-11	CARBON	220	5%	1/4W	
R047	1-249-405-11	CARBON	100	5%	1/4W	
R052	1-249-417-11	CARBON	1K	5%	1/4W	
R053	1-249-419-11	CARBON	1.5K	5%	1/4W	
R054	1-247-842-11	CARBON	3K	5%	1/4W	
R055	1-249-437-11	CARBON	47K	5%	1/4W	
R058	1-249-429-11	CARBON	10K	5%	1/4W	
R060	1-249-409-11	CARBON	220	5%	1/4W	
R062	1-249-409-11	CARBON	220	5%	1/4W	
R063	1-249-409-11	CARBON	220	5%	1/4W	
R066	1-249-410-11	CARBON	270	5%	1/4W	
R067	1-249-408-11	CARBON	180	5%	1/4W	
R068	1-249-410-11	CARBON	270	5%	1/4W	
R069	1-249-421-11	CARBON	2.2K	5%	1/4W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R070	1-249-425-11	CARBON	4.7K	5%	1/4W	
R071	1-249-413-11	CARBON	470	5%	1/4W	
R072	1-247-891-00	CARBON	330K	5%	1/4W	
R073	1-249-417-11	CARBON	1K	5%	1/4W	
R074	1-249-429-11	CARBON	10K	5%	1/4W	
R075	1-215-455-00	METAL	27K	1%	1/6W	
R076	1-249-409-11	CARBON	220	5%	1/4W	
R077	1-249-421-11	CARBON	2.2K	5%	1/4W	
R078	1-249-421-11	CARBON	2.2K	5%	1/4W	
R079	1-249-417-11	CARBON	1K	5%	1/4W	
R082	1-249-405-11	CARBON	100	5%	1/4W	
R083	1-249-409-11	CARBON	220	5%	1/4W	
R084	1-249-409-11	CARBON	220	5%	1/4W	
R085	1-249-416-11	CARBON	820	5%	1/4W	
R086	1-249-417-11	CARBON	1K	5%	1/4W	
R087	1-249-417-11	CARBON	1K	5%	1/4W	
R088	1-249-433-11	CARBON	22K	5%	1/4W	
R090	1-249-425-11	CARBON	4.7K	5%	1/4W	
R091	1-249-409-11	CARBON	220	5%	1/4W	
R092	1-249-408-11	CARBON	180	5%	1/4W	
R099	1-249-405-11	CARBON	100	5%	1/4W	
		<VARIABLE RESISTOR>				
RV001	1-228-996-00	RES, ADJ, CARBON 47K				
		<CRYSTAL>				
X003	1-577-611-11	OSCILALTOR, CERAMIC				
X358	1-567-505-11	OSCILLATOR, CRYSTAL				

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REF.NO.	PART NO.	DESCRIPTION				REMARK
	*1-632-539-11	Q BOARD *******				
	1-537-268-11	TERMINAL BOARD, INPUT/OUTPUT				
	1-537-269-11	TERMINAL BOARD, INPUT/OUTPUT				
	*1-564-522-11	PLUG, CONNECTOR 7P				
		<CAPACITOR>				
C3001	1-126-160-11	ELECT	1MF	20%	50V	
C3002	1-124-589-11	ELECT	47MF	20%	16V	
C3003	1-124-589-11	ELECT	47MF	20%	16V	
C3004	1-126-160-11	ELECT	1MF	20%	50V	
C3005	1-126-160-11	ELECT	1MF	20%	50V	
C3006	1-126-160-11	ELECT	1MF	20%	50V	
C3007	1-164-097-11	CERAMIC	0.022MF		50V	
C3008	1-124-589-11	ELECT	47MF	20%	16V	
C3009	1-124-589-11	ELECT	47MF	20%	16V	
		<COMPOSITION CIRCUIT BLOCK>				
CP3002	1-232-347-00	COMPOSITION CIRCUIT BLOCK				
CP3003	1-232-348-00	COMPOSITION CIRCUIT BLOCK				
		<DIODE>				
D3001	8-719-911-19	DIODE 1SS119				
		<MODULE>				
IC3001	1-808-916-11	MODULE, BUFFER (BUF-1)				

Q A

REF.NO.	PART NO.	DESCRIPTION				REMARK
IC3003	1-808-916-11	MODULE, BUFFER (BUF-1)				
IC3004	1-808-916-11	MODULE, BUFFER (BUF-1)				
		<TRANSISTOR>				
Q3001	8-729-904-34	TRANSISTOR DTA114TS				
Q3003	8-729-900-89	TRANSISTOR DTC144ES				
Q3004	8-729-900-89	TRANSISTOR DTC144ES				
Q3005	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q3006	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q3007	8-729-119-78	TRANSISTOR 2SC2785-HFE				
		<RESISTOR>				
R3001	1-247-104-00	CARBON	75	5%	1/4W	
R3002	1-249-409-11	CARBON	220	5%	1/4W	
R3003	1-249-409-11	CARBON	220	5%	1/4W	
R3004	1-249-417-11	CARBON	1K	5%	1/4W	
R3005	1-249-417-11	CARBON	1K	5%	1/4W	
R3006	1-247-104-00	CARBON	75	5%	1/4W	
R3008	1-247-104-00	CARBON	75	5%	1/4W	
R3010	1-249-429-11	CARBON	10K	5%	1/4W	
R3011	1-249-429-11	CARBON	10K	5%	1/4W	
R3012	1-249-429-11	CARBON	10K	5%	1/4W	
R3013	1-249-405-11	CARBON	100	5%	1/4W	
R3014	1-249-417-11	CARBON	1K	5%	1/4W	
R3015	1-249-405-11	CARBON	100	5%	1/4W	
R3016	1-249-409-11	CARBON	220	5%	1/4W	
R3017	1-249-417-11	CARBON	1K	5%	1/4W	
R3018	1-249-417-11	CARBON	1K	5%	1/4W	
R3020	1-249-405-11	CARBON	100	5%	1/4W	
R3021	1-249-409-11	CARBON	220	5%	1/4W	
R3022	1-249-409-11	CARBON	220	5%	1/4W	
R3023	1-249-417-11	CARBON	1K	5%	1/4W	
R3024	1-249-441-11	CARBON	100K	5%	1/4W	
R3025	1-249-433-11	CARBON	22K	5%	1/4W	
R3030	1-249-440-11	CARBON	82K	5%	1/4W	
R3031	1-249-440-11	CARBON	82K	5%	1/4W	
R3032	1-249-440-11	CARBON	82K	5%	1/4W	
R3033	1-249-440-11	CARBON	82K	5%	1/4W	
R3034	1-249-440-11	CARBON	82K	5%	1/4W	
R3035	1-249-440-11	CARBON	82K	5%	1/4W	
R3036	1-249-421-11	CARBON	2.2K	5%	1/4W	
R3037	1-249-421-11	CARBON	2.2K	5%	1/4W	
R3038	1-249-421-11	CARBON	2.2K	5%	1/4W	
R3040	1-249-417-11	CARBON	1K	5%	1/4W	
R3041	1-247-887-00	CARBON	220K	5%	1/4W	
		<SWITCH>				
S3002	1-570-257-11	SWITCH, PUSH (1 KEY)				
S3003	1-571-640-21	SWITCH, SLIDE				

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REF.NO.	PART NO.	DESCRIPTION				REMARK
	*A-1296-651-A	A BOARD, COMPLETE				
	*1-506-517-11	PLUG, CONNECTOR (PC BOARD) 5P				
	*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P				
	*1-564-506-11	PLUG, CONNECTOR 3P				
	*1-564-509-11	PLUG, CONNECTOR 6P				
	*1-564-510-11	PLUG, CONNECTOR 7P				
	*1-564-511-11	PLUG, CONNECTOR 8P				
	*1-564-512-11	PLUG, CONNECTOR 9P				
	*1-564-513-11	PLUG, CONNECTOR 10P				
	*1-564-514-11	PLUG, CONNECTOR 11P				
	*1-564-516-11	PLUG, CONNECTOR 13P				
	*1-568-371-11	PIN, CONNECTOR (PC BOARD) 15P				
	4-382-854-01	SCREW (M3X8), P, SW (+)				
		<CAPACITOR>				
C200	1-164-079-11	CERAMIC	330PF	10%	50V	
C201	1-123-875-11	ELECT	10MF	20%	50V	
C202	1-124-477-11	ELECT	47MF	20%	16V	
C203	1-124-477-11	ELECT	47MF	20%	16V	
C204	1-124-477-11	ELECT	47MF	20%	16V	
C205	1-124-477-11	ELECT	47MF	20%	16V	
C206	1-126-101-11	ELECT	100MF	20%	16V	
C207	1-164-097-11	CERAMIC	0.022MF		50V	
C208	1-164-087-11	CERAMIC	0.0015MF	10%	50V	
C209	1-124-464-11	ELECT	0.22MF	20%	50V	
C210	1-123-875-11	ELECT	10MF	20%	50V	
C211	1-124-360-00	ELECT	1000MF	20%	16V	
C212	1-123-875-11	ELECT	10MF	20%	50V	
C213	1-164-097-11	CERAMIC	0.022MF		50V	
C214	1-106-383-00	MYLAR	0.047MF	10%	100V	
C215	1-124-557-11	ELECT	1000MF	20%	25V	
C216	1-126-101-11	ELECT	100MF	20%	16V	
C217	1-164-079-11	CERAMIC	330PF	10%	50V	
C218	1-102-973-00	CERAMIC	100PF	5%	50V	
C219	1-126-101-11	ELECT	100MF	20%	16V	
C220	1-124-477-11	ELECT	47MF	20%	25V	
C221	1-106-343-00	MYLAR	0.001MF	10%	100V	
C222	1-126-101-11	ELECT	100MF	20%	16V	
C223	1-124-477-11	ELECT	47MF	20%	16V	
C224	1-102-971-00	CERAMIC	82PF	5%	50V	
C226	1-124-499-11	ELECT	1MF	20%	50V	
C227	1-106-343-00	MYLAR	0.001MF	10%	100V	
C228	1-164-097-11	CERAMIC	0.022MF		50V	
C229	1-124-477-11	ELECT	47MF	20%	16V	
C230	1-124-499-11	ELECT	1MF	20%	50V	
C231	1-164-097-11	CERAMIC	0.022MF		50V	
C232	1-124-360-00	ELECT	1000MF	20%	16V	
C233	1-124-499-11	ELECT	1MF	20%	50V	
C234	1-124-477-11	ELECT	47MF	20%	16V	
C235	1-102-971-00	CERAMIC	82PF	5%	50V	
C236	1-124-902-00	ELECT	0.47MF	20%	50V	
C237	1-164-027-11	CERAMIC	22PF	5%	50V	
C238	1-124-477-11	ELECT	47MF	20%	16V	
C239	1-106-351-00	MYLAR	0.0022MF	10%	100V	
C240	1-124-927-11	ELECT	4.7MF	20%	50V	
C241	1-130-479-00	MYLAR	0.0047MF	5%	50V	
C242	1-164-097-11	CERAMIC	0.022MF		50V	
C243	1-136-165-00	FILM	0.1MF	5%	50V	
C244	1-124-925-11	ELECT	2.2MF	20%	50V	
C245	1-124-902-00	ELECT	0.47MF	20%	50V	
C246	1-124-477-11	ELECT	47MF	20%	16V	
C247	1-126-101-11	ELECT	100MF	20%	16V	
C248	1-123-875-11	ELECT	10MF	20%	50V	
C249	1-126-157-11	ELECT	10MF	20%	16V	
C250	1-124-902-00	ELECT	0.47MF	20%	50V	
C251	1-164-097-11	CERAMIC	0.022MF		50V	
C252	1-123-875-11	ELECT	10MF	20%	50V	
C253	1-124-902-00	ELECT	0.47MF	20%	50V	
C254	1-106-367-00	MYLAR	0.01MF	10%	100V	
C255	1-164-083-11	CERAMIC	680PF	10%	50V	

A

REF.NO.	PART NO.	DESCRIPTION			REMARK
C256	1-101-888-00	CERAMIC	68PF	5%	50V
C257	1-124-477-11	ELECT	47MF	20%	16V
C258	1-124-791-11	ELECT	1MF	20%	50V
C259	1-136-153-00	MYLAR	0.01MF	10%	50V
C260	1-136-161-00	FILM	0.047MF	5%	50V
C261	1-124-477-11	ELECT	47MF	20%	16V
C262	1-124-499-11	ELECT	1MF	20%	50V
C263	1-136-155-00	FILM	0.015MF	5%	50V
C264	1-124-499-11	ELECT	1MF	20%	50V
C265	1-124-499-11	ELECT	1MF	20%	50V
C266	1-164-097-11	CERAMIC	0.022MF		50V
C267	1-124-120-11	ELECT	220MF	20%	16V
C272	1-164-079-11	CERAMIC	330PF	10%	50V
C273	1-164-085-11	CERAMIC	0.001MF	10%	50V
C274	1-124-463-00	ELECT	0.1MF	20%	50V
C275	1-130-728-00	FILM	0.0022MF	5%	50V
C276	1-124-477-11	ELECT	47MF	20%	16V
C278	1-164-077-11	CERAMIC	220PF	10%	50V
C279	1-124-463-00	ELECT	0.1MF	20%	50V
C280	1-126-101-11	ELECT	100MF	20%	16V
C281	1-124-478-11	ELECT	100MF	20%	25V
C283	1-124-120-11	ELECT	220MF	20%	16V
C284	1-164-076-11	CERAMIC	180PF	10%	50V
C286	1-124-925-11	ELECT	2.2MF	20%	50V
C289	1-164-027-11	CERAMIC	22PF	5%	50V
C290	1-126-101-11	ELECT	100MF	20%	16V
C291	1-124-477-11	ELECT	47MF	20%	16V
C292	1-124-791-11	ELECT	1MF	20%	50V

<DIODE>

D200	8-719-936-56	DIODE DAN209S
D202	8-719-110-36	DIODE RD13ES-B2
D203	8-719-110-36	DIODE RD13ES-B2
D204	8-719-911-19	DIODE 1SS119
D205	8-719-911-19	DIODE 1SS119
D206	8-719-911-19	DIODE 1SS119
D207	8-719-110-36	DIODE RD13ES-B2
D208	8-719-109-69	DIODE RD3.6ES-B2
D209	8-719-911-19	DIODE 1SS119
D210	8-719-911-19	DIODE 1SS119
D211	8-719-936-56	DIODE DAN209S
D212	8-719-911-19	DIODE 1SS119
D213	8-719-911-19	DIODE 1SS119
D214	8-719-911-19	DIODE 1SS119
D215	8-719-911-19	DIODE 1SS119
D216	8-719-911-19	DIODE 1SS119
D217	8-719-911-19	DIODE 1SS119
D218	8-719-911-19	DIODE 1SS119
D219	8-719-911-19	DIODE 1SS119
D220	8-719-911-19	DIODE 1SS119
D221	8-719-911-19	DIODE 1SS119
D222	8-719-911-19	DIODE 1SS119
D223	8-719-911-19	DIODE 1SS119
D224	8-719-911-19	DIODE 1SS119
D225	8-719-911-19	DIODE 1SS119
D298	8-719-911-19	DIODE 1SS119

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC201	1-808-916-11	MODULE, BUFFER (BUF-1)	
IC202	1-808-916-11	MODULE, BUFFER (BUF-1)	
IC203	1-808-916-11	MODULE, BUFFER (BUF-1)	
IC204	1-808-916-11	MODULE, BUFFER (BUF-1)	
IC205	8-759-040-53	IC MC14053BCP	
IC206	8-759-420-04	IC AN5265	
IC207	1-808-917-11	MODULE, CGA (CGA-1A)	
IC208	8-759-982-21	IC RC78L05A	
IC209	8-759-800-81	IC LA7016	
IC210	8-759-040-53	IC MC14053BCP	
IC211	8-759-902-21	IC SN74LS221N	
IC212	8-759-634-10	IC M52001SP	
IC213	8-759-040-53	IC MC14053BCP	
IC214	8-759-420-58	IC AN5860	
IC215	8-759-902-21	IC SN74LS221N	
IC218	8-759-982-21	IC RC78L05A	
IC220	8-759-146-55	IC UPC2412HF	

<COIL>

L201	1-410-494-11	INDUCTOR	1MMH
L202	1-408-414-00	INDUCTOR	27UH
L203	1-410-510-11	INDUCTOR	12UH
L204	1-410-507-11	INDUCTOR	6.8UH

<TRANSISTOR>

Q200	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q201	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q202	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q203	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q204	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q205	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q206	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q207	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q208	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q209	8-729-900-36	TRANSISTOR DTC124ES
Q210	8-729-900-89	TRANSISTOR DTC144ES
Q211	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q212	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q213	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q214	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q215	8-729-140-97	TRANSISTOR 2SB734-34
Q216	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q217	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q218	8-729-920-98	TRANSISTOR 2SD1761-EF
Q219	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q220	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q221	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q222	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q223	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q224	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q225	8-729-115-30	TRANSISTOR 2SK105A-30
Q226	8-729-900-89	TRANSISTOR DTC144ES
Q227	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q228	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q229	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q230	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q231	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q232	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q233	8-729-900-89	TRANSISTOR DTC144ES
Q234	8-729-900-89	TRANSISTOR DTC144ES
Q235	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q236	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q237	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q238	8-729-900-89	TRANSISTOR DTC144ES
Q239	8-729-900-89	TRANSISTOR DTC144ES

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REF.NO.	PART NO.	DESCRIPTION				REMARK
Q240	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q241	8-729-900-89	TRANSISTOR DTC144ES				
Q242	8-729-900-89	TRANSISTOR DTC144ES				
Q243	8-729-140-97	TRANSISTOR 2SB734-34				
Q244	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q245	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q246	8-729-900-89	TRANSISTOR DTC144ES				
Q247	8-729-900-89	TRANSISTOR DTC144ES				
Q248	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q249	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q250	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q251	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q252	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q253	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q254	8-729-140-97	TRANSISTOR 2SB734-34				
Q255	8-729-900-89	TRANSISTOR DTC144ES				
Q256	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q261	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q262	8-729-900-89	TRANSISTOR DTC144ES				
Q263	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q264	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q265	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q268	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q269	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q270	8-729-900-89	TRANSISTOR DTC144ES				
Q271	8-729-900-89	TRANSISTOR DTC144ES				
Q272	8-729-900-89	TRANSISTOR DTC144ES				
Q273	8-729-900-89	TRANSISTOR DTC144ES				
Q274	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q275	8-729-900-89	TRANSISTOR DTC144ES				
Q276	8-729-900-89	TRANSISTOR DTC144ES				
		<RESISTOR>				
R200	1-247-704-11	CARBON	220	5%	1/4W	
R201	1-249-417-11	CARBON	1K	5%	1/4W	
R202	1-249-417-11	CARBON	1K	5%	1/4W	
R203	1-247-895-00	CARBON	470K	5%	1/4W	
R204	1-249-425-11	CARBON	4.7K	5%	1/4W	
R205	1-249-415-11	CARBON	680	5%	1/4W	
R206	1-249-382-11	CARBON	1.2	5%	1/4W	F
R207	1-247-725-11	CARBON	10K	5%	1/4W	
R208	1-249-441-11	CARBON	100K	5%	1/4W	
R209	1-249-441-11	CARBON	100K	5%	1/4W	
R210	1-249-401-11	CARBON	47	5%	1/4W	
R211	1-247-804-11	CARBON	75	5%	1/4W	
R212	1-247-804-11	CARBON	75	5%	1/4W	
R213	1-247-804-11	CARBON	75	5%	1/4W	
R214	1-247-804-11	CARBON	75	5%	1/4W	
R215	1-247-804-11	CARBON	75	5%	1/4W	
R216	1-249-421-11	CARBON	2.2K	5%	1/4W	
R217	1-249-417-11	CARBON	1K	5%	1/4W	
R218	1-247-717-11	CARBON	2.2K	5%	1/4W	
R219	1-247-717-11	CARBON	2.2K	5%	1/4W	
R220	1-247-717-11	CARBON	2.2K	5%	1/4W	
R221	1-247-717-11	CARBON	2.2K	5%	1/4W	
R222	1-249-421-11	CARBON	2.2K	5%	1/4W	
R223	1-249-437-11	CARBON	47K	5%	1/4W	
R224	1-249-421-11	CARBON	2.2K	5%	1/4W	
R225	1-249-417-11	CARBON	1K	5%	1/4W	
R226	1-249-401-11	CARBON	47	5%	1/4W	F
R227	1-249-401-11	CARBON	47	5%	1/4W	
R228	1-249-417-11	CARBON	1K	5%	1/4W	
R229	1-249-417-11	CARBON	1K	5%	1/4W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R230	1-249-417-11	CARBON	1K	5%	1/4W	
R231	1-249-417-11	CARBON	1K	5%	1/4W	
R232	1-249-401-11	CARBON	47	5%	1/4W	
R233	1-249-427-11	CARBON	6.8K	5%	1/4W	
R234	1-249-401-11	CARBON	47	5%	1/4W	
R235	1-249-401-11	CARBON	47	5%	1/4W	
R236	1-249-437-11	CARBON	47K	5%	1/4W	
R237	1-247-713-11	CARBON	1K	5%	1/4W	
R238	1-249-419-11	CARBON	1.5K	5%	1/4W	
R239	1-247-895-00	CARBON	470K	5%	1/4W	
R240	1-249-433-11	CARBON	22K	5%	1/4W	
R241	1-249-429-11	CARBON	10K	5%	1/4W	
R243	1-249-405-11	CARBON	100	5%	1/4W	
R244	1-249-415-11	CARBON	680	5%	1/4W	
R245	1-249-429-11	CARBON	10K	5%	1/4W	
R246	1-247-804-11	CARBON	75	5%	1/4W	
R247	1-249-389-11	CARBON	4.7	5%	1/4W	
R248	1-249-397-11	CARBON	22	5%	1/4W	F
R249	1-249-411-11	CARBON	330	5%	1/4W	
R250	1-249-417-11	CARBON	1K	5%	1/4W	
R251	1-249-437-11	CARBON	47K	5%	1/4W	
R252	1-249-429-11	CARBON	10K	5%	1/4W	
R253	1-249-441-11	CARBON	100K	5%	1/4W	
R254	1-249-417-11	CARBON	1K	5%	1/4W	
R255	1-247-713-11	CARBON	1K	5%	1/4W	
R256	1-249-417-11	CARBON	1K	5%	1/4W	
R257	1-249-417-11	CARBON	1K	5%	1/4W	
R258	1-249-433-11	CARBON	22K	5%	1/4W	
R259	1-249-437-11	CARBON	47K	5%	1/4W	
R260	1-249-417-11	CARBON	1K	5%	1/4W	
R261	1-249-405-11	CARBON	100	5%	1/4W	
R262	1-249-431-11	CARBON	15K	5%	1/4W	
R263	1-249-429-11	CARBON	10K	5%	1/4W	
R264	1-249-425-11	CARBON	4.7K	5%	1/4W	
R265	1-249-426-11	CARBON	5.6K	5%	1/4W	
R266	1-247-717-11	CARBON	2.2K	5%	1/4W	
R267	1-247-700-11	CARBON	100	5%	1/4W	
R269	1-249-405-11	CARBON	100	5%	1/4W	
R270	1-249-437-11	CARBON	47K	5%	1/4W	
R271	1-249-405-11	CARBON	100	5%	1/4W	
R272	1-249-425-11	CARBON	4.7K	5%	1/4W	
R273	1-249-401-11	CARBON	47	5%	1/4W	
R274	1-249-401-11	CARBON	47	5%	1/4W	
R275	1-249-401-11	CARBON	47	5%	1/4W	
R276	1-249-437-11	CARBON	47K	5%	1/4W	
R277	1-247-713-11	CARBON	1K	5%	1/4W	
R278	1-247-700-11	CARBON	100	5%	1/4W	
R279	1-247-713-11	CARBON	1K	5%	1/4W	
R280	1-249-417-11	CARBON	1K	5%	1/4W	
R281	1-249-405-11	CARBON	100	5%	1/4W	
R282	1-247-700-11	CARBON	100	5%	1/4W	
R283	1-249-405-11	CARBON	100	5%	1/4W	
R284	1-249-419-11	CARBON	1.5K	5%	1/4W	
R285	1-249-429-11	CARBON	10K	5%	1/4W	
R286	1-247-713-11	CARBON	1K	5%	1/4W	
R287	1-249-411-11	CARBON	330	5%	1/4W	
R288	1-249-411-11	CARBON	330	5%	1/4W	
R289	1-249-416-11	CARBON	820	5%	1/4W	
R290	1-249-429-11	CARBON	10K	5%	1/4W	
R291	1-249-469-11	CARBON	100K	5%	1/4W	
R292	1-249-429-11	CARBON	10K	5%	1/4W	
R293	1-249-425-11	CARBON	4.7K	5%	1/4W	
R294	1-249-433-11	CARBON	22K	5%	1/4W	

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REF.NO.	PART NO.	DESCRIPTION				REMARK
R295	1-215-435-00	METAL	3.9K	1%	1/6W	
R296	1-215-453-00	METAL	22K	1%	1/6W	
R297	1-247-704-11	CARBON	220	5%	1/4W	
R298	1-249-433-11	CARBON	22K	5%	1/4W	
R299	1-249-417-11	CARBON	1K	5%	1/4W	
R300	1-249-409-11	CARBON	220	5%	1/4W	
R301	1-249-429-11	CARBON	10K	5%	1/4W	
R302	1-249-417-11	CARBON	1K	5%	1/4W	
R303	1-249-434-11	CARBON	27K	5%	1/4W	
R304	1-249-417-11	CARBON	1K	5%	1/4W	
R305	1-249-405-11	CARBON	100	5%	1/4W	
R306	1-247-713-11	CARBON	1K	5%	1/4W	
R307	1-247-704-11	CARBON	220	5%	1/4W	
R308	1-249-425-11	CARBON	4.7K	5%	1/4W	
R309	1-249-409-11	CARBON	220	5%	1/4W	
R310	1-249-441-11	CARBON	100K	5%	1/4W	
R311	1-249-409-11	CARBON	220	5%	1/4W	
R312	1-249-423-11	CARBON	3.3K	5%	1/4W	
R313	1-247-700-11	CARBON	100	5%	1/4W	
R314	1-249-409-11	CARBON	220	5%	1/4W	
R315	1-249-411-11	CARBON	330	5%	1/4W	
R316	1-249-417-11	CARBON	1K	5%	1/4W	
R317	1-249-405-11	CARBON	100	5%	1/4W	
R318	1-249-409-11	CARBON	220	5%	1/4W	
R319	1-249-425-11	CARBON	4.7K	5%	1/4W	
R320	1-249-429-11	CARBON	10K	5%	1/4W	
R321	1-249-429-11	CARBON	10K	5%	1/4W	
R322	1-247-704-11	CARBON	220	5%	1/4W	
R323	1-249-437-11	CARBON	47K	5%	1/4W	
R324	1-249-409-11	CARBON	220	5%	1/4W	
R325	1-216-421-11	METAL OXIDE	12	5%	1W	F
R326	1-249-429-11	CARBON	10K	5%	1/4W	
R327	1-249-399-11	CARBON	33	5%	1/4W	
R328	1-249-409-11	CARBON	220	5%	1/4W	
R329	1-215-431-00	METAL	2.7K	1%	1/6W	
R330	1-215-455-00	METAL	27K	1%	1/6W	
R331	1-249-419-11	CARBON	1.5K	5%	1/4W	
R332	1-249-437-11	CARBON	47K	5%	1/4W	
R333	1-249-429-11	CARBON	10K	5%	1/4W	
R334	1-249-419-11	CARBON	1.5K	5%	1/4W	
R335	1-249-403-11	CARBON	68	5%	1/4W	
R336	1-249-465-11	CARBON	47K	5%	1/4W	
R337	1-215-906-11	METAL OXIDE	15	5%	3W	F
R338	1-249-423-11	CARBON	3.3K	5%	1/4W	
R339	1-249-441-11	CARBON	100K	5%	1/4W	
R340	1-247-714-11	CARBON	1.2K	5%	1/4W	F
R341	1-249-419-11	CARBON	1.5K	5%	1/4W	
R342	1-247-725-11	CARBON	10K	5%	1/4W	
R343	1-249-421-11	CARBON	2.2K	5%	1/4W	
R344	1-249-435-11	CARBON	33K	5%	1/4W	
R345	1-247-713-11	CARBON	1K	5%	1/4W	
R346	1-249-465-11	CARBON	47K	5%	1/4W	
R347	1-249-427-11	CARBON	6.8K	5%	1/4W	
R348	1-247-700-11	CARBON	100	5%	1/4W	
R349	1-247-700-11	CARBON	100	5%	1/4W	
R350	1-247-700-11	CARBON	100	5%	1/4W	
R351	1-215-469-00	METAL	100K	1%	1/6W	
R352	1-247-883-00	CARBON	150K	5%	1/4W	
R353	1-247-883-00	CARBON	150K	5%	1/4W	
R354	1-249-419-11	CARBON	1.5K	5%	1/4W	
R355	1-247-704-11	CARBON	220	5%	1/4W	
R356	1-247-704-11	CARBON	220	5%	1/4W	
R357	1-249-419-11	CARBON	1.5K	5%	1/4W	
R358	1-249-409-11	CARBON	220	5%	1/4W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R359	1-249-467-11	CARBON	68K	5%	1/4W	
R360	1-249-437-11	CARBON	47K	5%	1/4W	
R361	1-216-373-11	METAL OXIDE	2.2	5%	2W	F
R362	1-249-401-11	CARBON	47	5%	1/4W	
R363	1-249-401-11	CARBON	47	5%	1/4W	
R364	1-249-401-11	CARBON	47	5%	1/4W	
R365	1-249-419-11	CARBON	1.5K	5%	1/4W	
R366	1-215-421-00	METAL	1K	1%	1/6W	
R367	1-249-417-11	CARBON	1K	5%	1/4W	
R368	1-249-405-11	CARBON	100	5%	1/4W	
R369	1-249-436-11	CARBON	39K	5%	1/4W	
R370	1-249-433-11	CARBON	22K	5%	1/4W	
R371	1-249-414-11	CARBON	560	5%	1/4W	
R372	1-249-433-11	CARBON	22K	5%	1/4W	
R373	1-249-433-11	CARBON	22K	5%	1/4W	
R374	1-249-409-11	CARBON	220	5%	1/4W	
R375	1-247-704-11	CARBON	220	5%	1/4W	
R376	1-249-433-11	CARBON	22K	5%	1/4W	
R377	1-249-429-11	CARBON	10K	5%	1/4W	
R378	1-249-429-11	CARBON	10K	5%	1/4W	
R379	1-249-433-11	CARBON	22K	5%	1/4W	
R380	1-247-899-11	CARBON	680K	5%	1/4W	
R381	1-249-437-11	CARBON	47K	5%	1/4W	
R382	1-249-429-11	CARBON	10K	5%	1/4W	
R383	1-249-425-11	CARBON	4.7K	5%	1/4W	
R384	1-249-433-11	CARBON	22K	5%	1/4W	
R385	1-249-433-11	CARBON	22K	5%	1/4W	
R386	1-249-421-11	CARBON	2.2K	5%	1/4W	
R387	1-249-441-11	CARBON	100K	5%	1/4W	
R388	1-249-425-11	CARBON	4.7K	5%	1/4W	
R389	1-249-409-11	CARBON	220	5%	1/4W	
R391	1-249-417-11	CARBON	1K	5%	1/4W	
R392	1-247-722-11	CARBON	5.6K	5%	1/4W	
R393	1-247-726-11	CARBON	33K	5%	1/4W	
R394	1-249-465-11	CARBON	47K	5%	1/4W	
R395	1-249-441-11	CARBON	100K	5%	1/4W	
R396	1-247-700-11	CARBON	100	5%	1/4W	
R397	1-247-700-11	CARBON	100	5%	1/4W	
R398	1-249-425-11	CARBON	4.7K	5%	1/4W	
R399	1-247-700-11	CARBON	100	5%	1/4W	
R400	1-249-435-11	CARBON	33K	5%	1/4W	
R401	1-249-417-11	CARBON	1K	5%	1/4W	
R404	1-249-417-11	CARBON	1K	5%	1/4W	
R405	1-249-415-11	CARBON	680	5%	1/4W	
R406	1-249-409-11	CARBON	220	5%	1/4W	
R407	1-249-409-11	CARBON	220	5%	1/4W	
R416	1-249-417-11	CARBON	1K	5%	1/4W	
R417	1-247-891-00	CARBON	330K	5%	1/4W	

<VARIABLE RESISTOR>

RV201	1-228-993-00	RES, ADJ, METAL GLAZE 4.7K
RV202	1-228-996-00	RES, ADJ, METAL GLAZE 47K

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*1-633-816-11 AB BOARD
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*1-564-505-11	PLUG, CONNECTOR 2P
*1-565-481-11	CONNECTOR, BOARD TO BOARD 5P

AB **AC** **E** **H**

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION				REMARK
		<CAPACITOR>				
C3000	1-126-101-11	ELECT	100MF	20%	16V	
C3003	1-102-973-00	CERAMIC	100PF	5%	50V	
C3004	1-136-169-00	FILM	0.22MF	5%	50V	
C3005	1-136-161-00	FILM	0.047MF	5%	50V	
C3008	1-124-120-11	ELECT	220MF	20%	16V	
C3009	1-101-884-00	CERAMIC	56PF	5%	50V	
C3011	1-124-477-11	ELECT	47MF	20%	16V	
		<TRANSISTOR>				
Q3001	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q3002	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q3003	8-729-178-55	TRANSISTOR 2SC2785-E				
Q3004	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q3005	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q3006	8-729-119-78	TRANSISTOR 2SC2785-HFE				
		<RESISTOR>				
R3001	1-249-405-11	CARBON	100	5%	1/4W	
R3002	1-249-421-11	CARBON	2.2K	5%	1/4W	
R3003	1-249-409-11	CARBON	220	5%	1/4W	
R3004	1-249-421-11	CARBON	2.2K	5%	1/4W	
R3005	1-249-441-11	CARBON	100K	5%	1/4W	
R3006	1-249-437-11	CARBON	47K	5%	1/4W	
R3007	1-249-423-11	CARBON	3.3K	5%	1/4W	
R3008	1-249-421-11	CARBON	2.2K	5%	1/4W	
R3009	1-249-421-11	CARBON	2.2K	5%	1/4W	
R3010	1-249-417-11	CARBON	1K	5%	1/4W	
R3011	1-249-437-11	CARBON	47K	5%	1/4W	
R3012	1-247-903-00	CARBON	1M	5%	1/4W	
R3013	1-249-429-11	CARBON	10K	5%	1/4W	
R3014	1-249-409-11	CARBON	220	5%	1/4W	
R3015	1-249-425-11	CARBON	4.7K	5%	1/4W	
R3016	1-249-405-11	CARBON	100	5%	1/4W	
R3020	1-249-405-11	CARBON	100	5%	1/4W	

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	*1-634-210-11	AC BOARD ********				
	*1-564-506-11	PLUG, CONNECTOR 3P				
		<CAPACITOR>				
C225	1-136-173-00	FILM	0.47MF	5%	50V	
C238	1-124-902-00	ELECT	0.47MF	20%	50V	
C282	1-136-173-00	FILM	0.47MF	5%	50V	
		<TRANSISTOR>				
Q257	8-729-119-78	TRANSISTOR 2SC2785-HFE				
		<RESISTOR>				
R242	1-249-421-11	CARBON	2.2K	5%	1/4W	
R268	1-247-895-00	CARBON	470K	5%	1/4W	

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	*1-632-534-11	E BOARD *******				
	*1-564-506-11	PLUG, CONNECTOR 3P				
		<JACK>				
J4001	1-563-933-11	JACK, MINIATURE (DIA. 3.5)				
J4002	1-563-933-11	JACK, MINIATURE (DIA. 3.5)				
		<RESISTOR>				
R4001	1-247-743-11	CARBON	220	5%	1/2W	
R4002	1-247-743-11	CARBON	220	5%	1/2W	

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	*A-1371-602-A	H BOARD, COMPLETE *****************				
	*1-564-506-11	PLUG, CONNECTOR 3P				
	*1-568-106-11	PIN, CONNECTOR 4P				
⚠	*4-397-103-01	HOLDER, AC SWITCH				
		<CAPACITOR>				
C1001	1-123-875-11	ELECT	10MF	20%	50V	
C1002	1-164-070-11	CERAMIC	100PF	5%	50V	
C1003	1-164-070-11	CERAMIC	100PF	5%	50V	
C1004	1-164-097-11	CERAMIC	0.022MF		50V	
C1005	1-164-097-11	CERAMIC	0.022MF		50V	
C1006	1-124-477-11	ELECT	47MF	20%	16V	
C1007	1-164-097-11	CERAMIC	0.022MF		50V	
C1008	1-164-097-11	CERAMIC	0.022MF		50V	
C1009	1-164-097-11	CERAMIC	0.022MF		50V	
C1010	1-124-477-11	ELECT	47MF	20%	16V	
C1011	1-124-791-11	ELECT	1MF	20%	50V	
C1012	1-124-791-11	ELECT	1MF	20%	50V	
C1013	1-126-233-11	ELECT	22MF	20%	50V	
		<DIODE>				
D1000	8-719-109-89	DIODE RD5.6ES-B2				
D1001	8-719-933-28	DIODE DAP209S				
D1002	8-719-109-84	DIODE RD5.1ES-B1				
D1003	8-719-109-74	DIODE RD4.3ES-B1				
D1005	8-719-936-56	DIODE DAN209S				
D1006	8-719-911-19	DIODE 1SS119				
D1007	8-719-911-19	DIODE 1SS119				
D1008	8-719-110-36	DIODE RD13ES-B2				
D1009	8-719-911-19	DIODE 1SS119				
D1010	8-719-109-89	DIODE RD5.6ES-B2				
D1011	8-719-911-19	DIODE 1SS119				
LEDU1	1-808-949-11	LED UNIT (LEDU-13)				
LEDU2	1-808-918-11	LED UNIT (LEDU-9)				
		<IC>				
IC1001	8-759-143-81	IC UPD7564CS-094				
IC1002	8-752-330-59	IC CXK1011P				
IC1003	8-759-982-21	IC RC78L05A				
IC1004	8-759-102-28	IC UPD6326C				
		<COIL>				
L1001	1-410-521-11	INDUCTOR	100UH			
L1002	1-408-429-00	INDUCTOR	470UH			
		<TRANSISTOR>				

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piecè portant le numero specifie.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

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REF.NO.	PART NO.	DESCRIPTION				REMARK
Q1001	8-729-900-89	TRANSISTOR DTC144ES				
Q1002	8-729-900-89	TRANSISTOR DTC144ES				
Q1003	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q1004	8-729-900-89	TRANSISTOR DTC144ES				
Q1005	8-729-900-89	TRANSISTOR DTC144ES				
Q1006	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q1007	8-729-900-89	TRANSISTOR DTC144ES				
Q1008	8-729-900-65	TRANSISTOR DTA144ES				
Q1013	8-729-900-89	TRANSISTOR DTC144ES				
Q1014	8-729-900-65	TRANSISTOR DTA144ES				
Q1015	8-729-900-36	TRANSISTOR DTC124ES				
Q1019	8-729-900-89	TRANSISTOR DTC144ES				
Q1021	8-729-900-89	TRANSISTOR DTC144ES				
Q1022	8-729-900-89	TRANSISTOR DTC144ES				
		<RESISTOR>				
R1001	1-249-414-11	CARBON	560	5%	1/4W	
R1002	1-249-414-11	CARBON	560	5%	1/4W	
R1003	1-247-704-11	CARBON	220	5%	1/4W	
R1004	1-249-414-11	CARBON	560	5%	1/4W	
R1005	1-249-414-11	CARBON	560	5%	1/4W	
R1007	1-249-405-11	CARBON	100	5%	1/4W	
R1008	1-249-429-11	CARBON	10K	5%	1/4W	
R1009	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1010	1-249-441-11	CARBON	100K	5%	1/4W	
R1011	1-249-417-11	CARBON	1K	5%	1/4W	
R1012	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1013	1-249-417-11	CARBON	1K	5%	1/4W	
R1014	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1015	1-249-417-11	CARBON	1K	5%	1/4W	
R1016	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1017	1-249-469-11	CARBON	100K	5%	1/4W	
R1018	1-249-417-11	CARBON	1K	5%	1/4W	
R1019	1-249-433-11	CARBON	22K	5%	1/4W	
R1020	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1021	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1022	1-249-433-11	CARBON	22K	5%	1/4W	
R1023	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1024	1-249-414-11	CARBON	560	5%	1/4W	
R1025	1-249-417-11	CARBON	1K	5%	1/4W	
R1026	1-247-713-11	CARBON	1K	5%	1/4W	
R1030	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1031	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1032	1-249-433-11	CARBON	22K	5%	1/4W	
R1033	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1034	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1035	1-249-417-11	CARBON	1K	5%	1/4W	
R1036	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1037	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1038	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1039	1-249-409-11	CARBON	220	5%	1/4W	
R1040	1-249-409-11	CARBON	220	5%	1/4W	
R1041	1-249-417-11	CARBON	1K	5%	1/4W	
R1042	1-249-409-11	CARBON	220	5%	1/4W	
R1045	1-249-406-11	CARBON	120	5%	1/4W	
R1049	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1050	1-249-440-11	CARBON	82K	5%	1/4W	
R1051	1-249-417-11	CARBON	1K	5%	1/4W	
R1054	1-249-429-11	CARBON	10K	5%	1/4W	
R1055	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1056	1-249-417-11	CARBON	1K	5%	1/4W	
R1060	1-249-421-11	CARBON	2.2K	5%	1/4W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1070	1-249-426-11	CARBON	5.6K	5%	1/4W	
R1071	1-249-433-11	CARBON	22K	5%	1/4W	
R1072	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1073	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1074	1-249-417-11	CARBON	1K	5%	1/4W	
R1099	1-249-417-11	CARBON	1K	5%	1/4W	
		<SWITCH>				
S1001⚠	1-554-966-12	SWITCH, PUSH (AC POWER)(1 KEY)				
		<BLOCK>				
VSB1	1-572-190-11	SWITCH BLOCK				
VSB2	1-238-945-11	VOLUME BLOCK				
VSB3	1-238-946-11	VOLUME BLOCK				
		<CRYSTAL>				
X1001	1-577-163-11	VIBLATOR, CERAMIC				

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REF.NO.	PART NO.	DESCRIPTION
	*A-1316-099-A	G BOARD, COMPLETE
		*****************
	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P
	*1-533-189-11	HOLDER, FUSE
	1-560-435-00	HORIZONTAL PIN ASSY 2P
	*1-564-104-00	PIN, CONNECTOR 3P
	*1-564-242-00	PIN, CONNECTOR 5P
	*1-564-321-00	PIN, CONNECTOR 2P
	*1-564-518-11	PLUG, CONNECTOR 3P
	*1-564-520-11	PLUG, CONNECTOR 5P
	*1-564-675-11	PIN, CONNECTOR 8P
	*1-565-395-11	PIN, CONNECTOR 3P
	*1-568-106-11	PIN, CONNECTOR 4P
	3-704-359-01	SCREW (M3X10), SW (+) P
	*4-341-751-01	EYELET
	*4-341-752-01	EYELET
	4-363-414-00	SPACER, MICA
	*4-368-683-01	SPRING
	4-382-854-01	SCREW (M3X8), P, SW (+)

REF.NO.	PART NO.	DESCRIPTION				REMARK
		<CAPACITOR>				
C901 ⚠	1-161-741-12	CERAMIC	0.001MF	10%	400V	
C902 ⚠	1-136-360-51	FILM	0.22MF	20%	250V	
C903 ⚠	1-136-360-51	FILM	0.22MF	20%	250V	
C904 ⚠	1-161-953-51	CERAMIC	0.0047MF	20%	400V	
C905 ⚠	1-161-741-12	CERAMIC	0.001MF	10%	400V	
C906 ⚠	1-161-953-51	CERAMIC	0.0047MF	20%	400V	
C907	1-125-457-11	ELECT(BLOCK)	560MF	20%	200V	
C908	1-125-457-11	ELECT(BLOCK)	560MF	20%	200V	
C909	1-102-050-00	CERAMIC	0.01MF		500V	
C910	1-102-050-00	CERAMIC	0.01MF		500V	
C911	1-162-115-00	CERAMIC	330PF	10%	2KV	
C912	1-136-060-00	FILM	0.047MF	5%	400V	
C913	1-136-060-00	FILM	0.047MF	5%	400V	
C914	1-162-115-00	CERAMIC	330PF	10%	2KV	
C915	1-162-115-00	CERAMIC	330PF	10%	2KV	
C916	1-162-115-00	CERAMIC	330PF	10%	2KV	
C917	1-136-973-11	FILM	0.017MF	3%	1KV	
C918	1-124-477-11	ELECT	47MF	20%	16V	
C919	1-124-477-11	ELECT	47MF	20%	16V	

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REF.NO.	PART NO.	DESCRIPTION			REMARK
C920	1-136-239-11	FILM	0.01MF	3%	1KV
C921	1-129-764-00	FILM	0.039MF	10%	200V
C922	1-123-024-21	ELECT	33MF		160V
C923	1-123-024-21	ELECT	33MF		160V
C924	1-123-024-21	ELECT	33MF		160V
C925	1-124-126-00	ELECT	47MF	20%	16V
C926	1-126-104-11	ELECT	470MF	20%	25V
C927	1-126-104-11	ELECT	470MF	20%	35V
C928	1-123-875-11	ELECT	10MF	20%	50V
C929	1-124-126-00	ELECT	47MF	20%	16V
C930	1-162-116-00	CERAMIC	680PF	10%	2KV
C931	1-124-477-11	ELECT	47MF	20%	16V
C932	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C933	1-124-887-00	ELECT	3300MF	20%	16V
C934	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C935	1-124-563-11	ELECT	2200MF	20%	25V
C936	1-126-101-11	ELECT	100MF	20%	16V
C937	1-123-935-00	ELECT	33MF	20%	160V
C939	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C943 ⚠	1-136-360-51	FILM	0.22MF	20%	250V
C944	1-124-910-11	ELECT	47MF	20%	35V
C945	1-124-798-11	ELECT	1MF	20%	160V
C946	1-124-798-11	ELECT	1MF	20%	160V
C947	1-124-477-11	ELECT	47MF	20%	25V
C948	1-162-116-00	CERAMIC	680PF	10%	2KV
C949	1-124-477-11	ELECT	47MF	20%	25V

<DIODE>

REF.NO.	PART NO.	DESCRIPTION
D901	8-719-946-90	DIODE KBU4JL-6088
D902	8-719-301-18	DIODE RM2CS
D903	8-719-971-20	DIODE ERC38-06
D904	8-719-971-20	DIODE ERC38-06
D905	8-719-301-18	DIODE RM2CS
D906	8-719-971-20	DIODE ERC38-06
D907	8-719-971-20	DIODE ERC38-06
D908	8-719-300-33	DIODE RU-3AM
D909	8-719-500-25	DIODE D5KC20RH
D910	8-719-981-00	DIODE ERC81-004
D911	8-719-300-33	DIODE RU-3AM
D912	8-719-300-33	DIODE RU-3AM
D913	8-719-939-07	DIODE ERD38-06
D914	8-719-939-07	DIODE ERD38-06
D915	8-719-939-07	DIODE ERD38-06
D916	8-719-981-00	DIODE ERC81-004
D917	8-719-981-00	DIODE ERC81-004
D918	8-719-981-00	DIODE ERC81-004
D919	8-719-981-00	DIODE ERC81-004
D920	8-719-939-07	DIODE ERD38-06
D921	8-719-913-64	THYRISTOR CSM2B4A10
D922	8-719-911-55	DIODE U05G
D923	8-719-981-00	DIODE ERC81-004
D924	8-719-300-33	DIODE RU-3AM
D925	8-719-109-75	DIODE RD4.3ES-B2
D926	8-719-300-33	DIODE RU-3AM
D927	8-719-300-33	DIODE RU-3AM
D928	8-719-300-33	DIODE RU-3AM
D929	8-719-110-36	DIODE RD13ES-B2
D930	8-719-110-36	DIODE RD13ES-B2
D931	8-719-302-92	DIODE RB-151LFB
D932	8-719-302-92	DIODE RB-151LFB
D933	8-719-911-55	DIODE U05G
D934	8-719-300-33	DIODE RU-3AM
D935	8-719-300-33	DIODE RU-3AM

<FUSE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
F901 ⚠	1-532-746-11	FUSE, GLASS TUBE 4A/125V	

<IC>

REF.NO.	PART NO.	DESCRIPTION
IC901	1-235-449-11	POWER MODULE (DM-19)
IC902	8-759-144-82	IC UPC2405HF

<COIL>

REF.NO.	PART NO.	DESCRIPTION	
L901	1-408-226-00	INDUCTOR	82UH
L902	1-459-155-00	COIL (WITH CORE)	45UH
L903	1-410-666-31	INDUCTOR	18UH
L904	1-410-671-31	INDUCTOR	47UH
L905	1-459-155-00	COIL (WITH CORE)	45UH
L906	1-410-671-31	INDUCTOR	47UH
L907 ⚠	1-459-946-11	COIL, NOISE FILTER	
L908 ⚠	1-459-946-11	COIL, NOISE FILTER	
L999	1-410-666-31	INDUCTOR	18UH

<IC LINK>

REF.NO.	PART NO.	DESCRIPTION
PS901	1-532-675-21	LINK, IC
PS902	1-532-675-21	LINK, IC

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION
Q901	8-729-904-23	TRANSISTOR 2SC3318-S
Q902	8-729-904-23	TRANSISTOR 2SC3318-S
Q903	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q904	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q905	8-729-140-96	TRANSISTOR 2SD774-34
Q906	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q907	8-729-140-96	TRANSISTOR 2SD774-34
Q908	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q909	8-729-119-76	TRANSISTOR 2SA1175-HFE

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R901 ⚠	1-244-939-91	CARBON	560K	5%	1/2W	
R902 ⚠	1-247-703-91	CARBON	180	5%	1/4W	F
R903	1-202-840-00	SOLID	150K	10%	1/2W	
R904	1-202-840-00	SOLID	150K	10%	1/2W	
R905	1-202-842-11	SOLID	220K	10%	1/2W	
R906	1-202-842-11	SOLID	220K	10%	1/2W	
R907	1-202-842-11	SOLID	220K	10%	1/2W	
R908	1-216-374-00	METAL OXIDE	2.7	5%	2W	F
R909	1-207-451-00	WIREWOUND	0.1	10%	1/2W	
R910	1-216-374-00	METAL OXIDE	2.7	5%	2W	F
R911	1-249-381-11	CARBON	1	5%	1/4W	F
R912	1-249-423-11	CARBON	3.3K	5%	1/4W	
R913	1-215-871-11	METAL OXIDE	2.2K	5%	1W	F
R914	1-249-429-11	CARBON	10K	5%	1/4W	
R915	1-215-871-11	METAL OXIDE	2.2K	5%	1W	F
R916	1-216-431-11	METAL OXIDE	560	5%	1W	F
R917	1-215-872-11	METAL OXIDE	3.3K	5%	1W	F
R918	1-249-441-11	CARBON	100K	5%	1/4W	
R919	1-247-700-11	CARBON	100	5%	1/4W	F
R920	1-215-469-00	METAL	100K	1%	1/6W	
R921	1-215-451-00	METAL	18K	1%	1/6W	
R922	1-215-451-00	METAL	18K	1%	1/6W	
R923	1-214-780-00	METAL	130K	1%	1/4W	

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REF.NO.	PART NO.	DESCRIPTION				REMARK
R924	1-202-842-11	SOLID	220K	10%	1/2W	
R925	1-215-449-00	METAL	15K	1%	1/6W	
R926	1-215-469-00	METAL	100K	1%	1/6W	
R927	1-249-474-11	CARBON	1	5%	1/2W	F
R928 ⚠	1-217-288-11	WIREWOUND	1.5	10%	5W	F
R929	1-249-470-11	CARBON	0.47	5%	1/2W	F
R930	1-249-437-11	CARBON	47K	5%	1/4W	
R931	1-249-421-11	CARBON	2.2K	5%	1/4W	
R932	1-249-425-11	CARBON	4.7K	5%	1/4W	
R933	1-249-423-11	CARBON	3.3K	5%	1/4W	
R941	1-247-289-00	CARBON	8.2M	5%	1W	
R942	1-249-395-11	CARBON	15	5%	1/4W	F

<RELAY>

REF.NO.	PART NO.	DESCRIPTION
RY901 ⚠	1-515-738-11	RELAY

<TRANSFORMER>

REF.NO.	PART NO.	DESCRIPTION
T901 ⚠	1-421-704-11	CDT
T902	1-421-886-11	PIT
T903	1-421-889-11	PRT
T904	1-421-889-11	PRT
T905	1-421-888-11	PRT
T906	1-421-885-11	COT
T907	1-421-887-11	PHT
T908 ⚠	1-421-776-11	LFT

<THERMISTOR>

REF.NO.	PART NO.	DESCRIPTION
TH901 ⚠	1-800-820-**12**	THERMISTOR, POWER
THP901 ⚠	1-808-059-31	THERMISTOR, POSITIVE

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REF.NO.	PART NO.	DESCRIPTION
	*A-1331-040-A	C BOARD, COMPLETE *****************
	*1-506-371-00	PIN, CONNECTOR 2P
	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P
	*1-508-767-00	PIN, CONNECTOR (5MM PITCH) 5P
⚠	1-526-819-11	SOCKET, PICTURE TUBE
	*1-564-509-11	PLUG, CONNECTOR 6P
	*1-564-513-11	PLUG, CONNECTOR 10P

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
C701	1-124-791-11	ELECT	1MF	20%	50V	
C702	1-106-367-00	MYLAR	0.01MF	10%	100V	
C703	1-106-367-00	MYLAR	0.01MF	10%	100V	
C704	1-106-367-00	MYLAR	0.01MF	10%	100V	
C705	1-124-791-11	ELECT	1MF	20%	50V	
C706	1-164-097-11	CERAMIC	0.022MF		50V	
C707	1-124-910-11	ELECT	47MF	20%	50V	
C708	1-164-070-11	CERAMIC	100PF	5%	50V	
C709	1-164-070-11	CERAMIC	100PF	5%	50V	
C710	1-164-070-11	CERAMIC	100PF	5%	50V	
C711	1-123-948-00	ELECT	22MF	20%	250V	
C712	1-106-391-12	MYLAR	0.1MF	10%	200V	
C713	1-106-391-12	MYLAR	0.1MF	10%	200V	
C714	1-106-391-12	MYLAR	0.1MF	10%	200V	
C715	1-124-667-11	ELECT	10MF	20%	100V	
C716	1-124-667-11	ELECT	10MF	20%	100V	
C717	1-124-667-11	ELECT	10MF	20%	100V	
C718	1-124-798-11	ELECT	1MF	20%	160V	
C719	1-124-798-11	ELECT	1MF	20%	160V	
C720	1-124-798-11	ELECT	1MF	20%	160V	
C721	1-162-114-00	CERAMIC	0.0047MF		2KV	
C722	1-123-024-21	ELECT	33MF		160V	
C723	1-162-114-00	CERAMIC	0.0047MF		2KV	
C726	1-164-089-11	CERAMIC	0.0022MF		50V	
C727	1-106-395-00	MYLAR	0.15MF	10%	200V	
C729	1-124-478-11	ELECT	100MF	20%	25V	
C730	1-162-116-00	CERAMIC	680PF	10%	2KV	

<COMPOSITION CIRCUIT BLOCK>

REF.NO.	PART NO.	DESCRIPTION
CP702	1-232-096-00	COMPOSITION CIRCUIT BLOCK

<DIODE>

REF.NO.	PART NO.	DESCRIPTION
D701	8-719-901-83	DIODE 1SS83
D702	8-719-901-83	DIODE 1SS83
D703	8-719-901-83	DIODE 1SS83
D704	8-719-901-83	DIODE 1SS83
D705	8-719-901-83	DIODE 1SS83
D706	8-719-901-83	DIODE 1SS83
D707	8-719-901-83	DIODE 1SS83
D708	8-719-901-83	DIODE 1SS83
D709	8-719-901-83	DIODE 1SS83
D712	8-719-110-06	DIODE RD8.2ES-B1
D713	8-719-901-83	DIODE 1SS83

<IC>

REF.NO.	PART NO.	DESCRIPTION
IC701	8-752-039-40	IC CXA1044BP
IC702	8-749-921-15	IC VPM03F

<COIL>

REF.NO.	PART NO.	DESCRIPTION	
L701	1-410-459-11	INDUCTOR	1.2UH
L702	1-410-459-11	INDUCTOR	1.2UH
L703	1-410-459-11	INDUCTOR	1.2UH
L704	1-410-675-31	INDUCTOR	120UH
L706	1-408-420-00	INDUCTOR	82UH

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION			
R700	1-247-887-00	CARBON	220K	5%	1/4W
R701	1-249-437-11	CARBON	47K	5%	1/4W
R702	1-249-437-11	CARBON	47K	5%	1/4W
R703	1-249-417-11	CARBON	1K	5%	1/4W
R704	1-249-405-11	CARBON	100	5%	1/4W
R705	1-249-413-11	CARBON	470	5%	1/4W
R706	1-249-417-11	CARBON	1K	5%	1/4W
R707	1-249-401-11	CARBON	47	5%	1/4W
R708	1-249-401-11	CARBON	47	5%	1/4W
R709	1-249-401-11	CARBON	47	5%	1/4W
R710	1-249-405-11	CARBON	100	5%	1/4W
R711	1-249-413-11	CARBON	470	5%	1/4W
R712	1-249-413-11	CARBON	470	5%	1/4W
R713	1-249-413-11	CARBON	470	5%	1/4W
R714	1-249-402-11	CARBON	56	5%	1/4W
R715	1-249-402-11	CARBON	56	5%	1/4W
R716	1-249-402-11	CARBON	56	5%	1/4W
R717	1-247-903-00	CARBON	1M	5%	1/4W
R718	1-247-903-00	CARBON	1M	5%	1/4W
R719	1-247-903-00	CARBON	1M	5%	1/4W

C D1

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REF.NO.	PART NO.	DESCRIPTION				REMARK
R720	1-249-417-11	CARBON	1K	5%	1/4W	
R721	1-249-417-11	CARBON	1K	5%	1/4W	
R722	1-249-417-11	CARBON	1K	5%	1/4W	
R723	1-215-873-00	METAL OXIDE	4.7K	5%	1W	F
R724	1-215-873-00	METAL OXIDE	4.7K	5%	1W	F
R725	1-215-873-00	METAL OXIDE	4.7K	5%	1W	F
R729	1-249-417-11	CARBON	1K	5%	1/4W	
R730	1-249-417-11	CARBON	1K	5%	1/4W	
R731	1-249-417-11	CARBON	1K	5%	1/4W	
R732	1-247-695-11	SOLID	22	5%	1/4W	
R733	1-247-695-11	SOLID	22	5%	1/4W	
R734	1-247-695-11	SOLID	22	5%	1/4W	
R735	1-202-838-00	SOLID	100K	10%	1/2W	
R736	1-249-401-11	CARBON	47	5%	1/4W	
R737	1-249-401-11	CARBON	47	5%	1/4W	
R738	1-249-401-11	CARBON	47	5%	1/4W	
R739	1-249-434-11	CARBON	27K	5%	1/4W	
R740	1-249-433-11	CARBON	22K	5%	1/4W	
R741	1-249-429-11	CARBON	10K	5%	1/4W	
R742	1-249-417-11	CARBON	1K	5%	1/4W	
R743	1-249-413-11	CARBON	470	5%	1/4W	
R744	1-249-423-11	CARBON	3.3K	5%	1/4W	
R745	1-249-423-11	CARBON	3.3K	5%	1/4W	
R746	1-249-423-11	CARBON	3.3K	5%	1/4W	

<VARIABLE RESISTOR>

REF.NO.	PART NO.	DESCRIPTION
RV700	1-228-996-00	RES, ADJ, CARBON 47K
RV701	1-228-993-00	RES, ADJ, CARBON 4.7K
RV702	1-230-504-11	RES, ADJ, CARBON 220
RV703	1-230-504-11	RES, ADJ, CARBON 220
RV704	1-230-504-11	RES, ADJ, CARBON 220
RV705	1-224-252-99	RES, ADJ, METAL GLAZE 10K
RV706	1-224-252-99	RES, ADJ, METAL GLAZE 10K
RV707	1-224-252-99	RES, ADJ, METAL GLAZE 10K
RV708	1-230-798-11	RES, ADJ, METAL GLAZE 90M
RV709	1-228-993-00	RES, ADJ, CARBON 4.7K
RV710	1-228-990-00	RES, ADJ, CARBON 1K
RV711	1-228-990-00	RES, ADJ, CARBON 1K

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PART NO.	DESCRIPTION
*A-1345-900-A	DI BOARD, COMPLETE ******************
*1-508-767-00	PIN, CONNECTOR (5MM PITCH) 5P
*1-564-506-11	PLUG, CONNECTOR 3P
*1-564-513-11	PLUG, CONNECTOR 10P
*1-564-516-11	PLUG, CONNECTOR 13P
*1-564-674-11	PIN, CONNECTOR 8P
*1-568-536-11	PLUG (MINIATURE DY) 6P
*4-341-751-01	EYELET (EY4,EY5,EY6,EY7,EY8,EY9,EY10, EY11,EY12,EY13,EY14,EY15,EY16,EY17,EY18, EY19,EY20,EY21,EY22,EY23,EY24,EY25,EY26, EY27,EY28,EY29,EY30,EY31,EY32,EY33,EY34, EY35,EY36)
*4-341-752-01	EYELET (EY1,EY2,EY3)
*4-381-827-01	HOLDER, TR
4-382-854-01	SCREW (M3X8), P, SW (+)

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION			REMARK
C501	1-123-024-21	ELECT	33MF		160V
C502	1-124-902-00	ELECT	0.47MF	20%	50V
C503	1-124-119-00	ELECT	330MF	20%	16V
C504	1-124-484-11	ELECT	220MF	20%	35V
C505	1-124-477-11	ELECT	47MF	20%	16V
C506	1-161-830-00	CERAMIC	0.0047MF		500V
C507	1-126-101-11	ELECT	100MF	20%	16V
C508	1-106-391-12	MYLAR	0.1MF	10%	200V
C509	1-124-634-11	ELECT	1MF	20%	250V
C510	1-123-379-00	ELECT	0.47MF	20%	50V
C511	1-136-541-11	FILM	1.5MF	5%	200V
C512	1-106-365-00	MYLAR	0.0082MF		200V
C513	1-136-627-11	FILM	0.022MF	3%	1KV
C514	1-136-569-11	FILM	1.2MF	5%	200V
C515 ⚠	1-130-336-51	FILM	0.0068MF	5%	630V
C516	1-102-129-00	CERAMIC	0.01MF	10%	50V
C517	1-126-233-11	ELECT	22MF	20%	50V
C518	1-136-598-11	FILM	3MF	5%	200V
C519	1-126-234-11	ELECT	2200MF	20%	16V
C520	1-106-383-00	MYLAR	0.047MF		200V
C521	1-123-875-11	ELECT	10MF	20%	50V
C522	1-124-927-11	ELECT	4.7MF	20%	50V
C523	1-124-477-11	ELECT	47MF	20%	16V
C524	1-162-114-00	CERAMIC	0.0047MF		2KV
C525	1-108-965-11	MYLAR	0.33MF	10%	200V
C526	1-123-949-00	ELECT	33MF	20%	250V
C527	1-136-569-11	FILM	1.2MF	5%	200V
C528	1-102-978-00	CERAMIC	220PF	5%	50V
C529	1-124-562-11	ELECT	47MF	20%	160V
C530	1-102-129-00	CERAMIC	0.01MF	10%	50V
C531	1-129-702-00	FILM	0.001MF	10%	630V
C532	1-126-105-11	ELECT	1000MF	20%	35V
C533	1-126-101-11	ELECT	100MF	20%	16V
C534	1-129-702-00	FILM	0.001MF	10%	630V
C535	1-124-347-00	ELECT	100MF	20%	160V
C536	1-136-598-11	FILM	3MF	5%	200V
C537	1-124-120-11	ELECT	220MF	20%	16V
C538	1-162-116-00	CERAMIC	680PF	10%	2KV
C539	1-108-688-11	MYLAR	0.0047MF	10%	200V
C540 ⚠	1-162-115-91	CERAMIC	330PF	10%	2KV
C541	1-106-367-00	MYLAR	0.01MF	10%	100V
C542	1-102-038-00	CERAMIC	0.001MF		500V
C543	1-136-853-11	FILM	0.56MF	5%	200V
C544	1-106-355-12	MYLAR	0.0033MF	10%	100V
C545	1-124-799-11	ELECT	2.2MF	20%	160V
C546	1-102-038-00	CERAMIC	0.001MF		500V
C547	1-129-722-00	FILM	0.047MF	5%	630V
C548	1-106-359-00	MYLAR	0.0047MF	10%	100V
C549	1-106-343-00	MYLAR	0.001MF	10%	100V
C550	1-162-117-00	CERAMIC	100PF	10%	500V
C551	1-123-875-11	ELECT	10MF	20%	50V
C552	1-129-723-00	FILM	0.056MF	5%	630V
C553 ⚠	**1-108-429-91**	MYLAR	0.047MF		200V
C554	1-106-363-00	MYLAR	0.0068MF	10%	100V
C555	1-136-071-**00**	FILM	0.0057MF	3%	2KV
C556	1-124-477-11	ELECT	47MF	20%	16V
C557	1-124-667-11	ELECT	10MF	20%	100V
C558	1-106-367-00	MYLAR	0.01MF	10%	100V
C559	1-124-045-00	ELECT	4.7MF	20%	50V
C560	1-106-367-00	MYLAR	0.01MF	10%	100V
C561 ⚠	1-162-134-91	CERAMIC	470PF	10%	2KV
C562	1-136-173-00	FILM	0.47MF	5%	50V
C563	1-106-367-00	MYLAR	0.01MF	10%	100V
C564	1-162-115-00	CERAMIC	330PF	10%	2KV
C565	1-162-115-00	CERAMIC	330PF	10%	2KV
C566	1-102-121-00	CERAMIC	0.0022MF	10%	50V
C567	1-162-288-31	CERAMIC	330PF	10%	50V

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REF.NO.	PART NO.	DESCRIPTION	REMARK
C568	1-162-115-00	CERAMIC 330PF 10% 2KV	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D505	8-719-971-20	DIODE ERC38-06	
D506	8-719-911-19	DIODE 1SS119	
D507	8-719-976-64	DIODE RGP02-17	
D508	8-719-109-93	DIODE RD6.2ES-B2	
D509	8-719-911-55	DIODE U05G	
D510	8-719-976-64	DIODE RGP02-17	
D511	8-719-911-19	DIODE 1SS119	
D512	8-719-110-48	DIODE RD18ES-B1	
D513	8-719-973-95	DIODE ERD09-15	
D514	8-719-971-20	DIODE ERC38-06	
D515	8-719-973-95	DIODE ERD09-15	
D516	8-719-911-55	DIODE U05G	
D517	8-719-911-19	DIODE 1SS119	
D518	8-719-971-20	DIODE ERC38-06	
D519	8-719-302-59	DIODE FMU-26S	
D520	8-719-911-19	DIODE 1SS119	
D521	8-719-911-19	DIODE 1SS119	
D522	8-719-971-20	DIODE ERC38-06	
D523	8-719-911-19	DIODE 1SS119	
D524	8-719-911-19	DIODE 1SS119	
D525	8-719-300-76	DIODE RH-1A	
D526	8-719-911-55	DIODE U05G	
D527	8-719-300-76	DIODE RH-1A	
D528	8-719-911-19	DIODE 1SS119	
D529	8-719-911-19	DIODE 1SS119	

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC501	8-759-982-26	IC KC78L12A	
IC502	8-759-014-95	IC MC1495L	
IC503	8-759-981-95	IC RC4558S	

<COIL>

REF.NO.	PART NO.	DESCRIPTION	REMARK
L501	1-459-215-00	CORE COIL	
L502	1-421-421-00	COIL, CHOKE 100UH	
L503 ⚠	1-459-671-11	COIL (WITH CORE)	
L504 ⚠	1-459-670-12	H.L.C	
L505	1-459-104-00	COIL, DUST CORE	
L506	1-408-239-00	INDUCTOR 4.7MMH	
L507	1-408-092-00	INDUCTOR 330UH	
L508	1-422-613-11	COIL, AIR CORE	
L509	1-459-215-00	CORE COIL	
L510	1-459-454-00	COIL, FERRITE CHOKE	
L511	1-421-329-00	COIL, CHOKE	
L512	1-459-123-00	COIL,DUST CORE(PAC)	
L513	1-408-072-00	INDUCTOR 47UH	

<NEON LAMP>

REF.NO.	PART NO.	DESCRIPTION	REMARK
NL502	1-519-108-99	LAMP, NEON	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q501	8-729-900-89	TRANSISTOR DTC144ES	
Q502	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q503	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q504	8-729-140-97	TRANSISTOR 2SB734-34	
Q505	8-729-140-96	TRANSISTOR 2SD774-34	
Q506	8-729-900-89	TRANSISTOR DTC144ES	
Q507	8-729-140-96	TRANSISTOR 2SD774-34	
Q508	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q509	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q510	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q511	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q512	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q513	8-729-805-07	TRANSISTOR 2SD1887-CA	
Q514	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q515	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q516	8-729-140-96	TRANSISTOR 2SD774-34	
Q517	8-729-140-97	TRANSISTOR 2SB734-34	
Q518	8-729-900-80	TRANSISTOR DTC114ES	
Q519	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q520	8-729-900-36	TRANSISTOR DTC124ES	
Q521	8-729-803-82	TRANSISTOR 2SC3468-E	
Q522	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q523	8-729-401-18	TRANSISTOR 2SB940-P	
Q524	8-729-401-21	TRANSISTOR 2SD1264-P	
Q525	8-729-900-36	TRANSISTOR DTC124ES	
Q526	8-729-107-26	TRANSISTOR 2SD1585-K	
Q527	8-729-119-78	TRANSISTOR 2SC2785-HFE	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R500	1-202-820-11	SOLID	1.5K	10%	1/2W	
R501	1-249-425-11	CARBON	4.7K	5%	1/4W	
R502	1-249-437-11	CARBON	47K	5%	1/4W	
R503	1-249-428-11	CARBON	8.2K	5%	1/4W	
R504	1-249-431-11	CARBON	15K	5%	1/4W	
R505	1-247-725-11	CARBON	10K	5%	1/4W	
R506	1-249-427-11	CARBON	6.8K	5%	1/4W	
R507	1-249-426-11	CARBON	5.6K	5%	1/4W	
R508	1-249-409-11	CARBON	220	5%	1/4W	
R509	1-247-719-11	CARBON	3.3K	5%	1/4W	
R510	1-249-429-11	CARBON	10K	5%	1/4W	
R511	1-249-429-11	CARBON	10K	5%	1/4W	
R512	1-216-430-11	METAL OXIDE	390	5%	1W	F
R513	1-249-431-11	CARBON	15K	5%	1/4W	
R514	1-249-440-11	CARBON	82K	5%	1/4W	
R515	1-216-450-00	METAL OXIDE	82	5%	2W	F
R516	1-249-417-11	CARBON	1K	5%	1/4W	
R517	1-216-425-11	METAL OXIDE	56	5%	1W	F
R518	1-249-425-11	CARBON	4.7K	5%	1/4W	
R519	1-249-406-11	CARBON	120	5%	1/4W	
R520	1-215-886-11	METAL OXIDE	100	5%	2W	F
R521	1-249-433-11	CARBON	22K	5%	1/4W	
R522	1-249-429-11	CARBON	10K	5%	1/4W	
R523	1-216-422-11	METAL OXIDE	18	5%	1W	F
R524	1-249-427-11	CARBON	6.8K	5%	1/4W	
R525	1-249-429-11	CARBON	10K	5%	1/4W	
R526	1-249-429-11	CARBON	10K	5%	1/4W	
R527	1-249-433-11	CARBON	22K	5%	1/4W	
R528	1-249-434-11	CARBON	27K	5%	1/4W	
R529	1-249-406-11	CARBON	120	5%	1/4W	
R530	1-202-719-00	SOLID	1M	10%	1/2W	
R531	1-215-863-11	METAL OXIDE	100	5%	1W	F
R532	1-249-432-11	CARBON	18K	5%	1/4W	
R533	1-249-417-11	CARBON	1K	5%	1/4W	
R534	1-249-432-11	CARBON	18K	5%	1/4W	
R535	1-249-429-11	CARBON	10K	5%	1/4W	
R536	1-202-849-00	SOLID	820K	10%	1/2W	
R537	1-216-353-00	METAL OXIDE	2.2	5%	1W	F
R538	1-216-353-00	METAL OXIDE	2.2	5%	1W	F
R539	1-249-427-11	CARBON	6.8K	5%	1/4W	

D1 D2

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REF.NO.	PART NO.	DESCRIPTION				REMARK
R540	1-249-414-11	CARBON	560	5%	1/4W	
R541	1-202-719-00	SOLID	1M	10%	1/2W	
R542	1-249-422-11	CARBON	2.7K	5%	1/4W	
R543	1-249-438-11	CARBON	56K	5%	1/4W	
R544	1-249-419-11	CARBON	1.5K	5%	1/4W	
R545	1-249-429-11	CARBON	10K	5%	1/4W	
R546	1-216-349-00	METAL OXIDE	1	5%	1W	F
R547	1-249-429-11	CARBON	10K	5%	1/4W	
R548	1-249-440-11	CARBON	82K	5%	1/4W	
R549	1-216-428-00	METAL OXIDE	180	5%	1W	F
R550	1-249-424-11	CARBON	3.9K	5%	1/4W	
R551	1-215-882-00	METAL OXIDE	22	5%	2W	F
R552	1-249-441-11	CARBON	100K	5%	1/4W	
R553	1-216-371-00	METAL OXIDE	1.5	5%	2W	F
R554	1-249-429-11	CARBON	10K	5%	1/4W	
R555	1-249-431-11	CARBON	15K	5%	1/4W	
R556	1-214-786-00	METAL	240K	1%	1/4W	
R557	1-249-429-11	CARBON	10K	5%	1/4W	
R558	1-214-925-00	CARBON	330K	5%	1/2W	
R559 ⚠	1-213-074-51	FUSIBLE	39	5%	1W	F
R560	1-216-369-00	METAL OXIDE	1	5%	2W	F
R561	1-249-429-11	CARBON	10K	5%	1/4W	
R562	1-249-440-11	CARBON	82K	5%	1/4W	
R563	1-249-387-11	CARBON	3.3	5%	1/4W	F
R564	1-249-429-11	CARBON	10K	5%	1/4W	
R565	1-247-721-11	CARBON	4.7K	5%	1/4W	
R566	1-247-720-11	CARBON	3.9K	5%	1/4W	
R567	1-215-892-11	METAL OXIDE	1K	5%	2W	F
R568	1-247-883-00	CARBON	150K	5%	1/4W	
R569	1-216-454-11	METAL OXIDE	390	5%	2W	F
R570	1-215-890-11	METAL OXIDE	470	5%	2W	F
R571	1-202-841-00	SOLID	180K	10%	1/2W	
R572	1-202-842-11	SOLID	220K	10%	1/2W	
R573	1-247-881-00	CARBON	120K	5%	1/4W	
R574	1-249-405-11	CARBON	100	5%	1/4W	
R575	1-249-467-11	CARBON	68K	5%	1/4W	
R576	1-249-417-11	CARBON	1K	5%	1/4W	
R577	1-249-465-11	CARBON	47K	5%	1/4W	
R578	1-249-441-11	CARBON	100K	5%	1/4W	
R579	1-247-891-00	CARBON	330K	5%	1/4W	
R580	1-249-429-11	CARBON	10K	5%	1/4W	
R581	1-249-435-11	CARBON	33K	5%	1/4W	
R582	1-249-429-11	CARBON	10K	5%	1/4W	
R583	1-249-417-11	CARBON	1K	5%	1/4W	
R584	1-249-409-11	CARBON	220	5%	1/4W	
R585	1-249-401-11	CARBON	47	5%	1/4W	F
R586	1-202-818-00	SOLID	1K	10%	1/2W	
R587	1-215-894-11	METAL OXIDE	2.2K	5%	2W	F
R588	1-249-429-11	CARBON	10K	5%	1/4W	
R589	1-249-417-11	CARBON	1K	5%	1/4W	F
R590	1-249-417-11	CARBON	1K	5%	1/4W	
R591	1-249-393-11	CARBON	10	5%	1/4W	F
R592	1-215-874-11	METAL OXIDE	6.8K	5%	1W	F
R593	1-249-427-11	CARBON	6.8K	5%	1/4W	
R594	1-215-921-11	METAL OXIDE	4.7K	5%	3W	F
R595	1-216-436-00	METAL OXIDE	3.9K	5%	1W	F
R596	1-249-463-11	CARBON	27K	5%	1/4W	
R597	1-249-417-11	CARBON	1K	5%	1/4W	
R598	1-249-439-11	CARBON	68K	5%	1/4W	
R599	1-249-416-11	CARBON	820	5%	1/4W	
R600	1-216-350-11	METAL OXIDE	1.2	5%	1W	F
R601	1-216-350-11	METAL OXIDE	1.2	5%	1W	F
R602	1-247-714-11	CARBON	1.2K	5%	1/4W	
R603	1-249-413-11	CARBON	470	5%	1/4W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R604	1-249-425-11	CARBON	4.7K	5%	1/4W	
R605	1-247-713-11	CARBON	1K	5%	1/4W	
R606	1-216-398-11	METAL OXIDE	5.6	5%	3W	F
R607	1-216-398-11	METAL OXIDE	5.6	5%	3W	F
R608	1-249-425-11	CARBON	4.7K	5%	1/4W	
R609	1-249-429-11	CARBON	10K	5%	1/4W	
R611	1-216-399-00	METAL OXIDE	6.8	5%	3W	F
R612	1-216-455-11	METAL OXIDE	560	5%	2W	F

<VARIABLE RESISTOR>

RV501	1-228-720-00	RES, ADJ, CERAMIC CARBON 1K
RV502	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M
RV503	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M
RV504	1-228-727-00	RES, ADJ, CERAMIC CARBON 47K

<RELAY>

RY501	1-515-626-11	RELAY
RY502	1-515-626-11	RELAY
RY503	1-515-626-11	RELAY
RY504	1-515-626-11	RELAY

<SPARK GAP>

SG501	1-519-422-11	GAP, SPARK

<TRANSFORMER>

T501	1-437-164-11	HDT
T502 ⚠	1-439-390-11	TRANSFORMER ASSY, FLYBACK (NX-2100)

<THERMISTOR>

TH501	1-800-103-00	THERMISTOR

****

*A-1345-921-A D2 BOARD, COMPLETE
****

*1-560-123-00 PLUG, CONNECTOR (2.5MM) 3P
*1-564-507-11 PLUG, CONNECTOR 4P
*1-564-508-11 PLUG, CONNECTOR 5P
*1-564-513-11 PLUG, CONNECTOR 10P
*1-564-516-11 PLUG, CONNECTOR 13P

*3-710-578-01 COVER, VOLUME, 6 MOLD

<CAPACITOR>

C1500	1-126-103-11	ELECT	470MF	20%	16V
C1501	1-124-480-11	ELECT	470MF	20%	25V
C1502	1-123-875-11	ELECT	10MF	20%	50V
C1503	1-126-103-11	ELECT	470MF	20%	16V
C1504	1-124-477-11	ELECT	47MF	20%	16V
C1505	1-164-070-11	CERAMIC	100PF	5%	50V
C1506	1-123-875-11	ELECT	10MF	20%	50V
C1507	1-124-477-11	ELECT	47MF	20%	16V
C1508	1-123-875-11	ELECT	10MF	20%	50V
C1509	1-164-077-11	CERAMIC	220PF	10%	50V
C1510	1-164-097-11	CERAMIC	0.022MF		50V
C1511	1-164-097-11	CERAMIC	0.022MF		50V
C1512	1-124-791-11	ELECT	1MF	20%	50V
C1513	1-123-875-11	ELECT	10MF	20%	50V
C1514	1-136-173-00	FILM	0.47MF	5%	50V

REF.NO.	PART NO.	DESCRIPTION				REMARK
C1515	1-123-875-11	ELECT	10MF	20%	50V	
C1516	1-123-875-11	ELECT	10MF	20%	50V	
C1517	1-123-875-11	ELECT	10MF	20%	50V	
C1518	1-126-101-11	ELECT	100MF	20%	16V	
C1519	1-124-927-11	ELECT	4.7MF	20%	50V	
C1520	1-164-081-11	CERAMIC	470PF	10%	50V	
C1521	1-164-097-11	CERAMIC	0.022MF		50V	
C1522	1-124-902-00	ELECT	0.47MF	20%	50V	
C1523	1-124-477-11	ELECT	47MF	20%	16V	
C1524	1-164-097-11	CERAMIC	0.022MF		50V	
C1525	1-106-369-00	MYLAR	0.012MF	10%	100V	
C1526	1-136-159-00	FILM	0.033MF	5%	50V	
C1527	1-130-483-00	MYLAR	0.01MF	5%	50V	
C1528	1-124-499-11	ELECT	1MF	20%	50V	
C1529	1-126-103-11	ELECT	470MF	20%	16V	
C1530	1-124-477-11	ELECT	47MF	20%	16V	
C1531	1-136-173-00	FILM	0.47MF	5%	50V	
C1532	1-124-791-11	ELECT	1MF	20%	50V	
C1533	1-124-791-11	ELECT	1MF	20%	50V	
C1534	1-126-101-11	ELECT	100MF	20%	16V	
C1535	1-108-622-11	MYLAR	0.0047MF	10%	100V	
C1536	1-124-927-11	ELECT	4.7MF	20%	50V	
C1537	1-124-927-11	ELECT	4.7MF	20%	50V	
C1538	1-102-129-00	CERAMIC	0.01MF	10%	50V	
C1539	1-124-927-11	ELECT	4.7MF	20%	50V	
C1540	1-106-375-12	MYLAR	0.022MF	10%	100V	
C1541	1-130-477-00	MYLAR	0.0033MF	5%	50V	
C1542	1-106-220-00	MYLAR	0.1MF	10%	100V	
C1543	1-136-159-00	FILM	0.033MF	5%	50V	
C1544	1-102-129-00	CERAMIC	0.01MF	10%	50V	
C1545	1-124-791-11	ELECT	1MF	20%	50V	
C1546	1-124-499-11	ELECT	1MF	20%	50V	
C1547	1-124-927-11	ELECT	4.7MF	20%	50V	
C1548	1-136-173-00	FILM	0.47MF	5%	50V	
C1549	1-106-355-12	MYLAR	0.0033MF	10%	100V	
C1550	1-124-927-11	ELECT	4.7MF	20%	50V	
C1551	1-123-875-11	ELECT	10MF	20%	50V	
C1552	1-106-363-00	MYLAR	0.0068MF	10%	100V	
C1553	1-136-173-00	FILM	0.47MF	5%	50V	
C1554	1-126-103-11	ELECT	470MF	20%	16V	
C1555	1-108-628-11	MYLAR	0.015MF	10%	100V	
C1556	1-164-079-11	CERAMIC	330PF	10%	50V	
C1557	1-129-793-00	FILM	0.047MF	5%	100V	
C1558	1-123-875-11	ELECT	10MF	20%	50V	
C1559	1-164-097-11	CERAMIC	0.022MF		50V	
C1560	1-124-925-11	ELECT	2.2MF	20%	50V	
C1561	1-102-816-00	CERAMIC	120PF	5%	50V	
C1562	1-130-475-00	MYLAR	0.0022MF	10%	50V	
C1563	1-164-079-11	CERAMIC	330PF	10%	50V	
C1564	1-164-097-11	CERAMIC	0.022MF		50V	
C1565	**1-108-622-11**	MYLAR	0.0047MF	10%	100V	
C1566	1-124-791-11	ELECT	1MF	20%	50V	
C1567	1-106-375-12	MYLAR	0.022MF	10%	100V	
C1568	1-108-628-11	MYLAR	0.015MF	10%	100V	
C1569	1-126-101-11	ELECT	100MF	20%	16V	
C1570	1-124-902-00	ELECT	0.47MF	20%	50V	
C1571	1-124-791-11	ELECT	1MF	20%	50V	
C1572	1-124-791-11	ELECT	1MF	20%	50V	
C1573	1-126-233-11	ELECT	22MF	20%	50V	
C1574	1-126-233-11	ELECT	22MF	20%	50V	
C1575	1-126-233-11	ELECT	22MF	20%	50V	
C1576	1-123-875-11	ELECT	10MF	20%	50V	
C1577	1-124-477-11	ELECT	47MF	20%	16V	
C1578	1-123-875-11	ELECT	10MF	20%	50V	

REF.NO.	PART NO.	DESCRIPTION				REMARK
C1579	1-126-101-11	ELECT	100MF	20%	16V	
C1580	1-164-097-11	CERAMIC	0.022MF		50V	
C1581	1-126-103-11	ELECT	470MF	20%	16V	
C1582	1-124-120-11	ELECT	220MF	20%	16V	
C1583	1-162-293-31	CERAMIC	820PF	10%	50V	
C1584	1-162-293-31	CERAMIC	820PF	10%	50V	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION
D1501	8-719-911-19	DIODE 1SS119
D1502	8-719-109-97	DIODE RD6.8ES-B2
D1503	8-719-110-08	DIODE RD8.2ES-B2
D1504	8-719-109-68	DIODE RD3.6ES-B1
D1505	8-719-911-19	DIODE 1SS119
D1506	8-719-110-13	DIODE RD9.1ES-B2
D1507	8-719-911-19	DIODE 1SS119
D1508	8-719-911-19	DIODE 1SS119
D1509	8-719-110-22	DIODE RD11ES-B2
D1510	8-719-109-93	DIODE RD6.2ES-B2
D1511	8-719-110-18	DIODE RD10ES-B3
D1512	8-719-109-69	DIODE RD3.6ES-B2
D1513	8-719-911-19	DIODE 1SS119
D1514	8-719-911-19	DIODE 1SS119
D1515	8-719-109-66	DIODE RD3.3ES-B2
D1516	8-719-110-13	DIODE RD9.1ES-B2
D1517	8-719-911-19	DIODE 1SS119
D1518	8-719-911-19	DIODE 1SS119
D1519	8-719-911-19	DIODE 1SS119
D1520	8-719-911-19	DIODE 1SS119
D1521	8-719-109-92	DIODE RD6.2ES-B1
D1522	8-719-911-19	DIODE 1SS119
D1523	8-719-911-19	DIODE 1SS119
D1524	8-719-911-19	DIODE 1SS119
D1525	8-719-911-19	DIODE 1SS119
D1526	8-719-913-44	DIODE ERA82-004

<IC>

REF.NO.	PART NO.	DESCRIPTION
IC1501	8-759-981-95	IC RC4558S
IC1502	8-759-981-95	IC RC4558S
IC1503	8-752-203-00	IC CX22030
IC1504	8-759-100-60	IC UPC1377C
IC1505	8-759-045-38	IC MC14538BCP
IC1506	8-759-245-16	IC TC4516BP

<COIL>

REF.NO.	PART NO.	DESCRIPTION	
L1501	1-410-464-11	INDUCTOR	3.3UH
L1502	1-408-080-00	INDUCTOR	100UH
L1503	1-408-420-00	INDUCTOR	82UH

<IC LINK>

REF.NO.	PART NO.	DESCRIPTION
PS1501	1-532-679-00	LINK, IC

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION
Q1500	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q1501	8-729-904-39	TRANSISTOR DTC114TS
Q1502	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q1503	8-729-904-39	TRANSISTOR DTC114TS
Q1504	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q1505	8-729-119-78	TRANSISTOR 2SC2785-HFE

D2

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q1506	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1507	8-729-900-89	TRANSISTOR DTC144ES	
Q1508	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1509	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1510	8-729-904-39	TRANSISTOR DTC114TS	
Q1511	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1512	8-729-801-46	TRANSISTOR 2SC3064-F	
Q1514	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1515	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1516	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1517	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1518	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1519	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1520	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1521	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1522	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1523	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1524	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1525	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1526	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1527	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1528	8-729-374-02	TRANSISTOR 2SB740-3	
Q1529	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1530	8-729-900-89	TRANSISTOR DTC144ES	
Q1531	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1532	8-729-115-30	TRANSISTOR 2SK105A-30	
Q1533	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1534	8-729-374-02	TRANSISTOR 2SB740-3	
Q1536	8-729-900-36	TRANSISTOR DTC124ES	
Q1537	8-729-900-89	TRANSISTOR DTC144ES	
Q1538	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1539	8-729-904-39	TRANSISTOR DTC114TS	
Q1540	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1541	8-729-115-30	TRANSISTOR 2SK105A-30	
Q1542	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1543	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1544	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1545	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1546	8-729-115-30	TRANSISTOR 2SK105A-30	
Q1547	8-729-900-36	TRANSISTOR DTC124ES	
Q1548	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1549	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1550	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1551	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1552	8-729-900-89	TRANSISTOR DTC144ES	
Q1553	8-729-374-02	TRANSISTOR 2SB740-3	
Q1554	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1555	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1556	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1557	8-729-900-89	TRANSISTOR DTC144ES	
Q1558	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1559	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1560	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1561	8-729-904-39	TRANSISTOR DTC114TS	
Q1562	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1563	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1564	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1565	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1566	8-729-900-65	TRANSISTOR DTA144ES	
Q1567	8-729-900-89	TRANSISTOR DTC144ES	
Q1568	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1569	8-729-900-80	TRANSISTOR DTC114ES	
Q1570	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1572	8-729-900-89	TRANSISTOR DTC144ES	
Q1573	8-729-900-63	TRANSISTOR DTA124ES	
Q1574	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1575	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1576	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1579	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1580	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1581	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1582	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1583	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1584	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1585	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1586	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1587	8-729-900-89	TRANSISTOR DTC144ES	
Q1588	8-729-900-89	TRANSISTOR DTC144ES	
Q1589	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1591	8-729-900-89	TRANSISTOR DTC144ES	
Q1592	8-729-900-89	TRANSISTOR DTC144ES	
Q1593	8-729-900-89	TRANSISTOR DTC144ES	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1500	1-249-419-11	CARBON	1.5K	5%	1/4W	
R1501	1-247-891-00	CARBON	330K	5%	1/4W	
R1502	1-249-411-11	CARBON	330	5%	1/4W	
R1503	1-249-417-11	CARBON	1K	5%	1/4W	
R1504	1-249-417-11	CARBON	1K	5%	1/4W	
R1505	1-249-437-11	CARBON	47K	5%	1/4W	
R1506	1-249-437-11	CARBON	47K	5%	1/4W	
R1507 ⚠	1-215-459-91	METAL	39K	1%	1/6W	
R1508 ⚠	1-215-459-31	METAL	39K	1%	1/6W	
R1509	1-215-417-00	METAL	680	1%	1/6W	
R1510	1-215-407-00	METAL	270	1%	1/6W	
R1511	1-249-429-11	CARBON	10K	5%	1/4W	
R1512	1-215-434-00	METAL	3.6K	1%	1/6W	
R1513	1-215-436-00	METAL	4.3K	1%	1/6W	
R1514	1-215-436-00	METAL	4.3K	1%	1/6W	
R1515	1-249-429-11	CARBON	10K	5%	1/4W	
R1516	1-249-429-11	CARBON	10K	5%	1/4W	
R1517	1-215-435-00	METAL	3.9K	1%	1/6W	
R1518	1-215-435-00	METAL	3.9K	1%	1/6W	
R1519	1-215-449-00	METAL	15K	1%	1/6W	
R1520	1-249-437-11	CARBON	47K	5%	1/4W	
R1521 ⚠	1-215-438-91	METAL	5.1K	1%	1/6W	
R1522	1-247-885-00	CARBON	180K	5%	1/4W	
R1523	1-249-429-11	CARBON	10K	5%	1/4W	
R1524	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1525	1-249-435-11	CARBON	33K	5%	1/4W	
R1526	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1527	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1528	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1529	1-249-437-11	CARBON	47K	5%	1/4W	
R1530	1-249-433-11	CARBON	22K	5%	1/4W	
R1531	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1532	1-215-453-00	METAL	22K	1%	1/6W	
R1533	1-215-467-00	METAL	82K	1%	1/6W	
R1534	1-215-429-00	METAL	2.2K	1%	1/6W	
R1535	1-247-870-11	CARBON	43K	5%	1/4W	
R1536	1-249-426-11	CARBON	5.6K	5%	1/4W	
R1537	1-215-429-00	METAL	2.2K	1%	1/6W	
R1538	1-249-433-11	CARBON	22K	5%	1/4W	
R1539	1-215-451-00	METAL	18K	1%	1/6W	
R1540	1-249-429-11	CARBON	10K	5%	1/4W	
R1541	1-249-421-11	CARBON	2.2K	5%	1/4W	

- The components identified by ⧓ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1542	1-215-459-00	METAL	39K	1%	1/6W	
R1543	1-249-433-11	CARBON	22K	5%	1/4W	
R1544	1-249-426-11	CARBON	5.6K	5%	1/4W	
R1545	1-249-431-11	CARBON	15K	5%	1/4W	
R1546	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1547	1-215-429-00	METAL	2.2K	1%	1/6W	
⧓ R1548⚠		METAL			1/4W	
	*1-506-371-00	PIN, CONNECTOR 2P; R1548				
R1549	1-247-887-00	CARBON	220K	5%	1/4W	
R1550	1-249-433-11	CARBON	22K	5%	1/4W	
R1551	1-249-435-11	CARBON	33K	5%	1/4W	
R1552	1-215-445-00	METAL	10K	1%	1/6W	
R1553	1-249-429-11	CARBON	10K	5%	1/4W	
R1554	1-249-426-11	CARBON	5.6K	5%	1/4W	
R1555	1-249-433-11	CARBON	22K	5%	1/4W	
R1556	1-216-471-11	METAL OXIDE	27	5%	3W	F
R1557	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1558	1-249-417-11	CARBON	1K	5%	1/4W	
R1559	1-249-429-11	CARBON	10K	5%	1/4W	
R1560	1-249-435-11	CARBON	33K	5%	1/4W	
R1561	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1562	1-249-429-11	CARBON	10K	5%	1/4W	
R1563	1-249-429-11	CARBON	10K	5%	1/4W	
R1564	1-249-429-11	CARBON	10K	5%	1/4W	
R1565	1-215-437-00	METAL	4.7K	1%	1/6W	
R1566	1-249-433-11	CARBON	22K	5%	1/4W	
R1567	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1568	1-215-439-00	METAL	5.6K	1%	1/6W	
R1569	1-247-889-00	CARBON	270K	5%	1/4W	
R1570	1-215-429-00	METAL	2.2K	1%	1/6W	
R1571	1-215-409-00	METAL	330	1%	1/6W	
R1572	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1573	1-247-874-11	CARBON	62K	5%	1/4W	
R1574	1-249-429-11	CARBON	10K	5%	1/4W	
R1575	1-249-433-11	CARBON	22K	5%	1/4W	
R1576	1-249-437-11	CARBON	47K	5%	1/4W	
R1577	1-247-713-11	CARBON	1K	5%	1/4W	
R1578	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1579	1-247-885-00	CARBON	180K	5%	1/4W	
R1580	1-249-430-11	CARBON	12K	5%	1/4W	
R1581	1-215-429-00	METAL	2.2K	1%	1/6W	
R1582	1-215-428-00	METAL	2K	1%	1/6W	
R1583	1-249-437-11	CARBON	47K	5%	1/4W	
R1584	1-249-437-11	CARBON	47K	5%	1/4W	
R1585	1-249-440-11	CARBON	82K	5%	1/4W	
R1586	1-215-411-00	METAL	390	1%	1/6W	
R1587	1-247-723-11	CARBON	6.8K	5%	1/4W	
R1588	1-249-441-11	CARBON	100K	5%	1/4W	
R1589	1-247-903-00	CARBON	1M	5%	1/4W	
R1590	1-215-445-00	METAL	10K	1%	1/6W	
R1591	1-247-891-00	CARBON	330K	5%	1/4W	
R1592	1-215-433-00	METAL	3.3K	1%	1/6W	
R1593	1-247-893-11	CARBON	390K	5%	1/4W	
R1594	1-249-441-11	CARBON	100K	5%	1/4W	
R1595	1-249-429-11	CARBON	10K	5%	1/4W	
R1596	1-259-878-11	CARBON	1.5M	5%	1/4W	
R1597	1-215-483-00	METAL	390K	1%	1/6W	
R1598	1-249-424-11	CARBON	3.9K	5%	1/4W	
R1599	1-249-435-11	CARBON	33K	5%	1/4W	
R1600	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1601	1-249-429-11	CARBON	10K	5%	1/4W	
R1602	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1603	1-249-424-11	CARBON	3.9K	5%	1/4W	
R1604	1-249-441-11	CARBON	100K	5%	1/4W	
R1605	1-215-449-00	METAL	15K	1%	1/6W	
R1606	1-259-884-11	CARBON	4.7M	5%	1/4W	
R1607	1-215-445-00	METAL	10K	1%	1/6W	
R1608	1-215-451-00	METAL	18K	1%	1/6W	
R1609	1-249-433-11	CARBON	22K	5%	1/4W	
R1610	1-249-405-11	CARBON	100	5%	1/4W	
R1611	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1612	1-249-433-11	CARBON	22K	5%	1/4W	
R1613	1-249-437-11	CARBON	47K	5%	1/4W	
R1614	1-249-417-11	CARBON	1K	5%	1/4W	
R1615	1-249-433-11	CARBON	22K	5%	1/4W	
R1616	1-215-471-00	METAL	120K	1%	1/6W	
R1617	1-249-411-11	CARBON	330	5%	1/4W	
R1618	1-249-429-11	CARBON	10K	5%	1/4W	
R1619	1-249-437-11	CARBON	47K	5%	1/4W	
R1620	1-249-417-11	CARBON	1K	5%	1/4W	
R1621	1-249-417-11	CARBON	1K	5%	1/4W	
R1622	1-215-459-00	METAL	39K	1%	1/6W	
R1623	1-215-445-00	METAL	10K	1%	1/6W	
R1624	1-249-417-11	CARBON	1K	5%	1/4W	
R1625	1-215-466-00	METAL	75K	1%	1/6W	
R1626	1-215-488-00	METAL	620K	1%	1/6W	
R1628	1-249-435-11	CARBON	33K	5%	1/4W	
R1629	1-249-435-11	CARBON	33K	5%	1/4W	
R1630	1-249-417-11	CARBON	1K	5%	1/4W	
R1631	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1632	1-249-433-11	CARBON	22K	5%	1/4W	
R1633	1-249-417-11	CARBON	1K	5%	1/4W	
R1634	1-249-435-11	CARBON	33K	5%	1/4W	
R1635	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1636	1-249-429-11	CARBON	10K	5%	1/4W	
R1637	1-249-419-11	CARBON	1.5K	5%	1/4W	
R1638	1-249-422-11	CARBON	2.7K	5%	1/4W	
R1639	1-249-437-11	CARBON	47K	5%	1/4W	
R1640	1-249-433-11	CARBON	22K	5%	1/4W	
R1641	1-249-429-11	CARBON	10K	5%	1/4W	
R1642	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1643	1-214-753-00	METAL	10K	1%	1/4W	
R1644	1-249-412-11	CARBON	390	5%	1/4W	
R1645	1-249-429-11	CARBON	10K	5%	1/4W	
R1646	1-249-433-11	CARBON	22K	5%	1/4W	
R1647	1-249-417-11	CARBON	1K	5%	1/4W	
R1648	1-249-435-11	CARBON	33K	5%	1/4W	
R1649	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1650	1-249-429-11	CARBON	10K	5%	1/4W	
R1651	1-249-411-11	CARBON	330	5%	1/4W	
R1652	1-249-437-11	CARBON	47K	5%	1/4W	
R1653	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1654	1-249-426-11	CARBON	5.6K	5%	1/4W	
R1655	1-249-428-11	CARBON	8.2K	5%	1/4W	
R1656	1-249-429-11	CARBON	10K	5%	1/4W	
R1657	1-249-437-11	CARBON	47K	5%	1/4W	
R1658	1-247-723-11	CARBON	6.8K	5%	1/4W	
R1659	1-249-440-11	CARBON	82K	5%	1/4W	
R1660	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1661	1-249-406-11	CARBON	120	5%	1/4W	
R1662	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1663	1-249-428-11	CARBON	8.2K	5%	1/4W	
R1664	1-249-439-11	CARBON	68K	5%	1/4W	
R1665	1-249-439-11	CARBON	68K	5%	1/4W	
R1666	1-249-433-11	CARBON	22K	5%	1/4W	
R1667	1-249-429-11	CARBON	10K	5%	1/4W	
R1668	1-249-429-11	CARBON	10K	5%	1/4W	

- The components identified by ⧓ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.
- ※ : Selected to yield optimum performance.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1669	1-249-425-11	CARBON	4.7K	5%	1/4W	
※R1670	1-214-729-00	METAL	1K	1%	1/4W	
※R1670	1-214-731-00	METAL	1.2K	1%	1/4W	
※**R1670**	**1-214-733-00**	**METAL**	**1.5K**	**1%**	**1/4W**	
※R1670	1-214-735-00	METAL	1.8K	1%	1/4W	
※R1670	1-214-737-00	METAL	2.2K	1%	1/4W	
※R1670	1-214-739-00	METAL	2.7K	1%	1/4W	
※R1670	1-214-741-00	METAL	3.3K	1%	1/4W	
※R1670	1-214-743-00	METAL	3.9K	1%	1/4W	
※R1670	1-214-745-00	METAL	4.7K	1%	1/4W	
※R1670	1-214-747-00	METAL	5.6K	1%	1/4W	
※R1670	1-214-749-00	METAL	6.8K	1%	1/4W	
※R1670	1-214-751-00	METAL	8.2K	1%	1/4W	
※R1670	1-214-753-00	METAL	10K	1%	1/4W	
※R1670	1-214-757-00	METAL	15K	1%	1/4W	
※R1670	1-214-761-00	METAL	22K	1%	1/4W	
※R1670	1-214-765-00	METAL	33K	1%	1/4W	
※R1670	1-214-769-00	METAL	47K	1%	1/4W	
※R1670	1-214-773-00	METAL	68K	1%	1/4W	
※R1670	1-214-777-00	METAL	100K	1%	1/4W	
	*1-506-371-00	PIN, CONNECTOR 2P; R1670				
R1671	1-249-405-11	CARBON	100	5%	1/4W	
R1672	1-249-428-11	CARBON	8.2K	5%	1/4W	
R1673	1-215-470-00	METAL	110K	1%	1/6W	
R1674	1-249-439-11	CARBON	68K	5%	1/4W	
R1675	1-214-725-00	METAL	680	1%	1/4W	
R1676	1-247-700-11	CARBON	100	5%	1/4W	
R1677	1-249-437-11	CARBON	47K	5%	1/4W	
⧓R1678⚠	[illegible]	METAL	[illegible]	[illegible]	1/4W	
	*1-506-371-00	PIN, CONNECTOR 2P; R1678				
R1679	1-249-413-11	CARBON	470	5%	1/4W	
R1680	1-247-897-11	CARBON	560K	5%	1/4W	
R1681	1-249-429-11	CARBON	10K	5%	1/4W	
R1682	1-249-417-11	CARBON	1K	5%	1/4W	
R1683	1-249-439-11	CARBON	68K	5%	1/4W	
R1684	1-249-437-11	CARBON	47K	5%	1/4W	
R1685	1-249-435-11	CARBON	33K	5%	1/4W	
R1686	1-249-430-11	CARBON	12K	5%	1/4W	
R1687	1-249-435-11	CARBON	33K	5%	1/4W	
R1688	1-247-887-00	CARBON	220K	5%	1/4W	
R1689	1-249-435-11	CARBON	33K	5%	1/4W	
R1690	1-249-435-11	CARBON	33K	5%	1/4W	
R1691	1-249-436-11	CARBON	39K	5%	1/4W	
R1692	1-249-429-11	CARBON	10K	5%	1/4W	
R1693	1-249-429-11	CARBON	10K	5%	1/4W	
R1694	1-215-450-00	METAL	16K	1%	1/6W	
R1695	1-249-433-11	CARBON	22K	5%	1/4W	
R1696	1-249-441-11	CARBON	100K	5%	1/4W	
R1697	1-249-414-11	CARBON	560	5%	1/4W	
R1698	1-249-414-11	CARBON	560	5%	1/4W	
R1699	1-249-439-11	CARBON	68K	5%	1/4W	
R1700	1-249-437-11	CARBON	47K	5%	1/4W	
R1701	1-249-433-11	CARBON	22K	5%	1/4W	
R1702	1-249-417-11	CARBON	1K	5%	1/4W	
R1703	1-249-417-11	CARBON	1K	5%	1/4W	
R1704	1-249-439-11	CARBON	68K	5%	1/4W	
R1705	1-249-437-11	CARBON	47K	5%	1/4W	
R1706	1-249-405-11	CARBON	100	5%	1/4W	
R1707	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1708	1-249-440-11	CARBON	82K	5%	1/4W	
R1709	1-249-417-11	CARBON	1K	5%	1/4W	
R1710	1-215-462-00	METAL	51K	1%	1/6W	
R1711	1-249-435-11	CARBON	33K	5%	1/4W	
R1712	1-249-417-11	CARBON	1K	5%	1/4W	
R1714	1-249-413-11	CARBON	470	5%	1/4W	
R1715	1-249-430-11	CARBON	12K	5%	1/4W	
R1716	1-249-437-11	CARBON	47K	5%	1/4W	
R1717	1-249-405-11	CARBON	100	5%	1/4W	
R1718	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1719	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1720	1-249-405-11	CARBON	100	5%	1/4W	
R1721	1-249-428-11	CARBON	8.2K	5%	1/4W	
R1722	1-249-411-11	CARBON	330	5%	1/4W	
R1724	1-249-424-11	CARBON	3.9K	5%	1/4W	
R1725	1-249-440-11	CARBON	82K	5%	1/4W	
R1726	1-249-409-11	CARBON	220	5%	1/4W	
R1727	1-249-435-11	CARBON	33K	5%	1/4W	
R1728	1-247-713-11	CARBON	1K	5%	1/4W	
※R1729	1-214-762-00	METAL	24K	1%	1/4W	
※R1729	1-214-763-00	METAL	27K	1%	1/4W	
※R1729	1-214-764-00	METAL	30K	1%	1/4W	
※R1729	1-214-765-00	METAL	33K	1%	1/4W	
※R1729	1-214-766-00	METAL	36K	1%	1/4W	
※R1729	1-214-767-00	METAL	39K	1%	1/4W	
※R1729	1-214-768-00	METAL	43K	1%	1/4W	
※R1729	1-214-769-00	METAL	47K	1%	1/4W	
※R1729	1-214-770-00	METAL	51K	1%	1/4W	
※R1729	1-214-771-00	METAL	56K	1%	1/4W	
※R1729	1-214-772-00	METAL	62K	1%	1/4W	
※R1729	1-214-773-00	METAL	68K	1%	1/4W	
※R1729	1-214-775-00	METAL	82K	1%	1/4W	
※R1729	1-214-777-00	METAL	100K	1%	1/4W	
※R1729	1-214-781-00	METAL	150K	1%	1/4W	
※R1729	1-214-785-00	METAL	220K	1%	1/4W	
※R1729	1-214-787-00	METAL	270K	1%	1/4W	
	*1-506-371-00	PIN, CONNECTOR 2P; R1729				
R1730	1-259-884-11	CARBON	4.7M	5%	1/4W	
R1731	1-259-882-11	CARBON	3.3M	5%	1/4W	
R1732	1-249-424-11	CARBON	3.9K	5%	1/4W	
R1733	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1734	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1735	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1736	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1737	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1738	1-249-437-11	CARBON	47K	5%	1/4W	
R1739	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1740	1-249-441-11	CARBON	100K	5%	1/4W	
R1741	1-249-437-11	CARBON	47K	5%	1/4W	
R1742	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1743	1-249-433-11	CARBON	22K	5%	1/4W	
R1744	1-249-437-11	CARBON	47K	5%	1/4W	
R1745	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1746	1-249-429-11	CARBON	10K	5%	1/4W	
R1747	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1748	1-249-429-11	CARBON	10K	5%	1/4W	
R1749	1-249-429-11	CARBON	10K	5%	1/4W	
※R1751	1-214-709-00	METAL	150	1%	1/4W	
※R1751	1-214-713-00	METAL	220	1%	1/4W	
※R1751	1-214-717-00	METAL	330	1%	1/4W	
※R1751	1-214-725-00	METAL	680	1%	1/4W	
※R1751	1-214-729-00	METAL	1K	1%	1/4W	
※R1751	1-214-733-00	METAL	1.5K	1%	1/4W	
※R1751	1-214-739-00	METAL	2.7K	1%	1/4W	
	*1-506-371-00	PIN, CONNECTOR 2P; R1751				
R1752	1-249-465-11	CARBON	47K	5%	1/4W	
R1753	1-249-424-11	CARBON	3.9K	5%	1/4W	
R1754	1-249-437-11	CARBON	47K	5%	1/4W	
R1755	1-249-422-11	CARBON	2.7K	5%	1/4W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1756	1-249-428-11	CARBON	8.2K	5%	1/4W	
R1757	1-247-895-00	CARBON	470K	5%	1/4W	
R1758	1-249-458-11	CARBON	8.2	5%	1/4W	F

<VARIABLE RESISTOR>

REF.NO.	PART NO.	DESCRIPTION
RV1500	1-228-994-00	RES, ADJ, CARBON 10K
RV1501	1-228-989-00	RES, ADJ, METAL GLAZE 470
RV1502	1-228-993-00	RES, ADJ, METAL GLAZE 4.7K
RV1503	1-228-999-00	RES, ADJ, METAL GLAZE 470K
RV1504	1-228-994-00	RES, ADJ, CARBON 10K
RV1505	1-228-993-00	RES, ADJ, CARBON 4.7K
RV1507	1-228-998-00	RES, ADJ, CARBON 220K
RV1508	1-228-999-00	RES, ADJ, CARBON 470K
RV1509	1-228-993-00	RES, ADJ, CARBON 4.7K
RV1510	1-228-991-00	RES, ADJ, CARBON 2.2K
RV1511	1-228-997-00	RES, ADJ, CARBON 100K
RV1512	1-228-997-00	RES, ADJ, CARBON 100K
RV1513	1-228-997-00	RES, ADJ, CARBON 100K
RV1514	1-224-253-99	RES, ADJ, METAL GLAZE 22K
RV1515	1-237-524-21	RES, ADJ, CARBON 1M
RV1601	1-228-995-00	RES, ADJ, CARBON 22K
RV1602	1-228-996-00	RES, ADJ, CARBON 47K

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A-1394-228-A U BOARD, COMPLETE
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*1-564-512-11 PLUG, CONNECTOR 9P

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION			
C2001	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C2002	1-126-101-11	ELECT	100MF	20%	16V
C2003	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C2004	1-123-875-11	ELECT	10MF	20%	50V
C2005	1-124-477-11	ELECT	47MF	20%	16V
C2006	1-124-477-11	ELECT	47MF	20%	16V
C2007	1-124-477-11	ELECT	47MF	20%	16V
C2010	1-124-902-00	ELECT	0.47MF	20%	50V
C2011	1-130-728-00	FILM	0.0022MF	5%	50V
C2012	1-106-359-00	MYLAR	0.0047MF	10%	100V
C2013	1-124-902-00	ELECT	0.47MF	20%	50V
C2014	1-124-902-00	ELECT	0.47MF	20%	50V
C2015	1-123-875-11	ELECT	10MF	20%	50V
C2016	1-124-902-00	ELECT	0.47MF	20%	50V
C2017	1-123-875-11	ELECT	10MF	20%	50V
C2018	1-124-902-00	ELECT	0.47MF	20%	50V
C2019	1-136-298-00	FILM	0.0033MF	5%	100V
C2021	1-163-**103-00**	CERAMIC CHIP	**27PF**	5%	50V
C2022	1-163-093-00	CERAMIC CHIP	10PF	5%	50V
C2023	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C2024	1-124-120-11	ELECT	220MF	20%	16V
C2025	1-135-155-21	TANTAL. CHIP	4.7MF	20%	10V
C2027	1-163-115-00	CERAMIC CHIP	82PF	5%	50V
C2028	1-126-101-11	ELECT	100MF	20%	16V
C2029	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C2030	1-126-101-11	ELECT	100MF	20%	16V
C2031	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C2032	1-124-477-11	ELECT	47MF	20%	16V
C2033	1-124-791-11	ELECT	1MF	20%	50V
C2034	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C2035	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C2098	1-163-093-00	CERAMIC CHIP	10PF	5%	50V
C2099	1-123-875-11	ELECT	10MF	20%	50V

<DIODE>

REF.NO.	PART NO.	DESCRIPTION
D2001	8-719-104-34	DIODE 1S2836
D2024	8-719-104-34	DIODE 1S2836
D2030	8-719-104-34	DIODE 1S2836
D2033	8-719-400-18	DIODE MA152WK
D2035	8-719-104-34	DIODE 1S2836
D2040	8-719-104-34	DIODE 1S2836
D2042	8-719-400-18	DIODE MA152WK
D2045	8-719-104-34	DIODE 1S2836

<IC>

REF.NO.	PART NO.	DESCRIPTION
IC2001	8-759-634-10	IC M52001SP
IC2002	8-759-931-07	IC SN74LS365ANS
IC2003	8-759-634-03	IC M54480P
IC2005	8-759-930-50	IC SN74LS157NS
IC2006	8-759-930-50	IC SN74LS157NS
IC2010	8-759-982-05	IC RC7805FA

<COIL>

REF.NO.	PART NO.	DESCRIPTION	
L2001	1-410-471-11	INDUCTOR	12UH

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION
Q2001	8-729-230-49	TRANSISTOR 2SC2712-YG
Q2002	8-729-230-49	TRANSISTOR 2SC2712-YG
Q2003	8-729-230-49	TRANSISTOR 2SC2712-YG
Q2004	8-729-230-49	TRANSISTOR 2SC2712-YG
Q2005	8-729-230-49	TRANSISTOR 2SC2712-YG
Q2006	8-729-230-49	TRANSISTOR 2SC2712-YG
Q2007	8-729-230-46	TRANSISTOR 2SA1162-YG
Q2008	8-729-230-49	TRANSISTOR 2SC2712-YG
Q2009	8-729-230-49	TRANSISTOR 2SC2712-YG
Q2010	8-729-230-49	TRANSISTOR 2SC2712-YG
Q2011	8-729-230-49	TRANSISTOR 2SC2712-YG
Q2012	8-729-901-01	TRANSISTOR DTC144EK
Q2015	8-729-230-49	TRANSISTOR 2SC2712-YG
Q2020	8-729-901-01	TRANSISTOR DTC144EK
Q2021	8-729-230-46	TRANSISTOR 2SA1162-YG
Q2022	8-729-230-46	TRANSISTOR 2SA1162-YG
Q2024	8-729-230-49	TRANSISTOR 2SC2712-YG
Q2025	8-729-230-49	TRANSISTOR 2SC2712-YG
Q2095	8-729-901-01	TRANSISTOR DTC144EK
Q2096	8-729-901-01	TRANSISTOR DTC144EK

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION			
R2001	1-216-033-00	METAL GLAZE	220	5%	1/10W
R2002	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R2003	1-216-022-00	METAL GLAZE	75	5%	1/10W
R2004	1-216-022-00	METAL GLAZE	75	5%	1/10W
R2005	1-216-022-00	METAL GLAZE	75	5%	1/10W
R2006	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R2007	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R2008	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R2009	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W
R2010	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W
R2011	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W
R2012	1-216-025-00	METAL GLAZE	100	5%	1/10W
R2013	1-216-049-00	METAL GLAZE	1K	5%	1/10W

U

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION				REMARK
R2014	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2015	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2016	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2017	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2018	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2019	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R2020	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R2021	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R2022	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R2023	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R2024	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R2025	1-216-107-00	METAL GLAZE	270K	5%	1/10W	
R2026	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R2027	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R2028	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R2030	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R2031	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2032	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2033	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R2034	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R2035	1-216-017-00	METAL GLAZE	47	5%	1/10W	
⚠R2036	1-212-958-**51**	FUSIBLE	10	5%	1/2W	F
R2037	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R2038	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2039	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2040	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R2041	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R2042	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2043	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2044	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R2045	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2046	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R2047	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2048	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R2049	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2050	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2051	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2052	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2053	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R2054	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R2055	1-216-107-00	METAL GLAZE	270K	5%	1/10W	
R2056	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2057	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2058	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2059	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R2060	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2061	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R2062	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2063	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2064	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R2065	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R2066	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R2067	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R2068	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R2069	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R2070	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2071	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2072	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2073	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2074	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2075	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2076	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R2077	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R2078	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R2079	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2080	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R2081	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R2082	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2083	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2084	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2085	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R2086	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R2087	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R2088	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R2089	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R2090	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R2091	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2092	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R2093	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R2094	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2095	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2096	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R2097	1-216-049-00	METAL GLAZE	1K	5%	1/10W	

<SWITCH>

REF.NO.	PART NO.	DESCRIPTION
S2001	1-572-189-11	SWITCH, PUSH (1 KEY)
S2002	1-571-868-11	SWITCH, PUSH (1 KEY)
S2003	1-571-427-11	SWITCH, SLIDE
S2004	1-571-429-11	SWITCH, SLIDE

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MISCELLANEOUS
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REF.NO.	PART NO.	DESCRIPTION
	⚠1-230-666-41	RESISTOR ASSY, HIGH-VOLTAGE
	⚠1-426-442-21	COIL, DEMAGNETIZATION
T909	⚠1-449-948-12	TRANSFORMER, POWER
	⚠1-451-291-13	DEFLECTION YOKE (Y14FBC)
	1-452-032-00	MAGNET, DISK; 10MM ϕ
	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM ϕ
	⚠1-526-945-11	INLET, AC 3P
	1-537-207-21	TERMINAL BOARD
	1-544-252-11	SPEAKER
CN901	⚠*1-568-507-11	CONNECTOR, BRIDGE 15P
V901	⚠8-738-251-05	PICTURE TUBE (M34JNQ15X)

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ACCESSORIES AND PACKING MATERIALS
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PART NO.	DESCRIPTION	REMARK
⚠1-557-377-11	CORD, POWER (3 CORE)	
1-569-174-11	CONVERTOR, D-SUB 9P	
3-751-151-21	MANUAL, INSTRUCTION	
*4-312-246-00	BAG, PROTECTION	
*4-397-134-01	CUSHION (UPPER) (ASSY)	
*4-397-135-01	CUSHION (LOWER) (ASSY)	
*4-397-143-01	INDIVIDUAL CARTON	

9-978-034-01

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Display Products Group

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